No. 4290

United States

Circuit Court of Appeals

For the Ninth Circuit.

ROY WARD and OTTO PETERSON, Copartners Doing Business Under the Firm Name of WARD & PETERSON, Copartners,

Appellants,

vs.

SHOPE BRICK COMPANY, a Corporation,

Appellee.

Transcript of Record.

Upon Appeal from the United States District Court for the District of Oregon.

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NAMES AND ADDRESSES OF ATTORNEYS OF RECORD.

JOSEPH L. ATKINS and LEICESTER B. ATKINS, Chamber of Commerce Building, Portland, Oregon,

For the Appellants.

ROBERT R. RANKIN, Platt Building, Portland, Oregon,

For the Appellee.

CITATION ON APPEAL.

United States of America,
District of Oregon,—ss.

To Shope Brick Company, a Corporation, GREETING:

WHEREAS, Roy Ward and Otto Peterson, Copartners doing business under the firm name of Ward & Peterson, copartners, have lately appealed to the United States Circuit Court of Appeals for the Ninth Circuit from a decree rendered in the Circuit Court of the United States for the District of Oregon, in your favor, and has given the security required by law;

YOU ARE therefore, hereby, cited and admonished to be and appear before said United States Circuit Court of Appeals for the Ninth Circuit, at San Francisco, California, within thirty days from the date hereof, to show cause, if any there be, why the said decree should not be corrected, and speedy

justice should not be done to the parties in that behalf.

GIVEN under my hand, at Portland, in said District, this 14th day of June, in the year of our Lord one thousand nine hundred and twenty-four.

R. S. BEAN,
Judge.

Due service of the foregoing citation on appeal is hereby admitted this 14th day of June, 1924.

ROBERT R. RANKIN,
Attorney for Shope Brick Company. [1*]

[Endorsed]: No. E–8661. 34–1. In the District Court of the United States for the District of Oregon. Shope Brick Company, a Corporation, Plaintiff, vs. Roy Ward and Otto Peterson, Individually, and Roy Ward and Otto Peterson, Copartners, Doing Business Under the Firm Name of Ward & Peterson, Copartners, Defendants. Citation on Appeal. U. S. District Court, District of Oregon. Filed Jun. 1, 1924. G. H. Marsh, Clerk. [2]

In the District Court of the United States for the District of Oregon.

July Term, 1923.

BE IT REMEMBERED, That on the 4th day of August, 1923, there was duly filed in the District Court of the United States for the District of Oregon, a bill of complaint, in words and figures as follows, to wit: [3]

*Page-number appearing at foot of page of original certified Transcript of Record.

In the District Court of the United States for the District of Oregon.

SHOPE BRICK COMPANY, a Corporation,
Complainant,

vs.

ROY WARD and OTTO PETERSON, Individually, and ROY WARD and OTTO PETERSON, Copartners, Doing Business Under the Firm Name and Style of WARD & PETERSON, Copartners,
Defendants.

BILL OF COMPLAINT.

To the Honorable Judges of the United States District Court for the District of Oregon.

The Shope Brick Company, an Oregon corporation, brings this, its bill of complaint, against Roy Ward and Otto Peterson, individually and as copartners, and having cause of suit against said defendants, complains and alleges as follows, to wit:

I.

The Shope Brick Company is a corporation organized under and existing by virtue of the laws of the State of Oregon, with its principal office and place of business located in the city of Portland, county of Multnomah, State of Oregon; that Roy Ward and Otto Peterson are residents of the city of Portland, county of Multnomah, State and District of Oregon, and as partners have been and now are engaged in the business of manufacturing ce-

ment brick, both common and color faced, and hearth tile at their plant at No. 1751 East 9th Street, in the city of Portland, county of Multnomah, State of Oregon, and have been operating as a copartnership under the assumed name and style of Ward & Peterson.

II.

That prior to the 9th day of October, 1909, David F. Shope, then being a citizen of the United States, residing at St. Paul, in the county of Ramsey, and State of Minnesota, was the true, first sole and original inventor or discoverer of certain [4] new and useful improvements in processes or methods of waterproofing cement blocks, not known or used by others in this country, not patented or described or illustrated in any printed publication in this or any foreign country before his invention or discovery thereof, or more than two years prior to his hereinafter mentioned application for letters patent of the United States therefor, and not in public use or on sale for more than two years prior to said application; which improvements had not been abandoned; and that no application for letters patent of any foreign country for said invention or discovery was filed by him or his legal representatives or assigns more than twelve months prior to said filing of the application therefor in the United States.

III.

That on the 9th day of October, 1909, the said David F. Shope, being then as aforesaid, the true, first, sole and original inventor or discoverer of the

said improvements in brick making, and being then a citizen of the United States, made due application in writing to the Commissioner of Patents of the United States for the grant of letters patent for the aforesaid improvements, and paid the fees required by the law therefor, and duly complied in all respects with all the conditions and requirements of then existing statutes of the United States and the rules of the Patent Office of the United States in such cases made and provided; and that said application was known and described as serial No. 521,796.

IV.

That prior to the 28th day of November, 1917, David F. Shope, then being a citizen of the United States, residing then at Portland, Oregon, was the true, first, sole and original inventor or discoverer of other certain new and useful improvements in processes of waterproofing and ornamenting objects such as cement blocks, not known or used by others in this country, not patented, [5] or described, or illustrated in any printed publication in this or any foreign country before his invention or discovery thereof, or more than two years prior to his hereinafter mentioned application for letters patent of the United States therefor, and not in public use or on sale for more than two years prior to said application; which improvements had not been abandoned; and that no application for letters patent of any foreign country for said invention or discovery was filed by him or his legal representatives or assigns, more than twelve months

prior to said filing of the application therefor in the United States.

V.

That on the 28th day of November, 1917, the said David F. Shope, being then as aforesaid, the true, first, sole and original inventor or discoverer of the said improvements in processes of waterproofing and ornamenting objects, and being then a citizen of the United States, made due application in writing to the Commissioner of Patents of the United States for the grant of letters patents for the aforesaid improvements, and paid the fees required by the law therefor, and duly complied in all respects with all the conditions and requirements of then existing statutes of the United States and the rules of the Patent Office of the United States in such cases made and provided; and that said application was known and described as serial No. 204,320.

VI.

That prior to the 13th day of June, 1917, David F. Shope, then being a citizen of the United States, residing at Portland, Oregon, was the true, first, sole and original inventor or discoverer of certain new and useful improvements in brick-making machines, not known or used by others in this country, not patented, or described, or illustrated in any printed publication in this or any [6] foreign country before his invention or discovery thereof, or more than two years prior to his hereinafter mentioned application for letters patent of the United States therefor, and not in public use or on sale for more than two years prior to said application;

which improvements had not been abandoned; and that no application for letters patent of any foreign country for said invention or discovery was filed by him or his legal representatives or assigns more than twelve months prior to said filing of the application therefor in the United States.

VII.

That on the 13th day of June, 1917, the said David F. Shope, being then as aforesaid, the true, first, sole and original inventor or discoverer of the said improvements in brick-making machines, and being then a citizen of the United States, made due application in writing to the Commissioner of Patents of the United States for the grant of letters patents for the aforesaid improvements, and paid the fees required by the law therefor, and duly complied in all respects with all the conditions and requirements of then existing statutes of the United States and the rules of the Patent Office of the United States in such cases made and provided; and that said application was known and described as serial No. 174,511.

VIII.

That on the 28th day of February, 1911, upon due proceedings and in full compliance with the statutes of the United States in such cases made and provided, letters patent of the United States, bearing date on that day, and numbered 985,709, were issued on said application serial No. 521,796, to said David F. Shope, his heirs or assigns, under the seal of the Patent Office of the United States; were signed by the Commissioner of Patents; were recorded in the

books of the Patent Office kept for that [7] purpose; and were delivered to said David F. Shope, for the term of seventeen years from the 28th day of February, 1911, granting the exclusive right to make, use and sell the said invention throughout the United States and the territories thereof; and the plaintiff prays that said letters patent may be deemed and taken as part of this bill; and to the original of the same, or a duly authenticated copy thereof, ready in court to be produced, the plaintiff prays leave to refer.

IX.

That by an instrument in writing, duly executed and delivered on or about the —— day of May, 1911, and recorded in the United States patent office on the 15th day of May, 1911, in Liber X86 of Transfers of Patents, and for a valuable consideration, the said David F. Shope sold and assigned the entire right, title and interest in and to said letters patent 985,709, together with all the rights or causes of action for any damages that may have accrued to him by virtue of said letters patent or the infringement thereof, to the Shope Brick Company, of Portland, Oregon, a corporation of Oregon, the plaintiff herein; and the plaintiff prays that said instrument in writing may be deemed and taken as a part of this bill, and to the original of the same, or to a duly authenticated copy thereof, ready in court to be produced, the applicant prays leave to refer.

X.

That by an instrument in writing duly executed and delivered on or about the —— day of June, 1918, and recorded in the United States patent office on

the 18th day of June, 1918, in Liber B105 of Transfers of Patents, and for a valuable consideration, the said David F. Shope sold and assigned the entire right, title and interest in and to said application, serial No. 204,320, and the letters patent that might be granted thereon, to the Shope [8] Brick Company of Portland, Oregon, the plaintiff herein, and a corporation of Oregon; and the plaintiff prays that said instrument in writing may be deemed and taken as a part of this bill and the original of the same, or to a duly authenticated copy thereof, ready in court to be produced, the plaintiff prays leave to refer.

XI.

That on the 25th day of June, 1918, upon due proceedings had and in full compliance with the statutes of the United States in such cases made and provided, letters patent of the United States, bearing date on that day, and numbered 1,270,450, were issued, on said application serial No. 204,320, to said David F. Shope, his heirs or assigns, under the seal of the Patent Office of the United States; were signed by the Commissioner of Patents; were recorded in the books of the Patent Office kept for that purpose; and were delivered to said David F. Shope, for the term of seventeen years from the 25th day of June, 1918, granting the exclusive right to make, use and sell the said invention throughout the United States and the territories thereof; and the plaintiff prays that said letters patent may be deemed and taken as part of this bill; and to the original of the same, or a duly authenticated

copy thereof, ready in court to be produced, the plaintiff prays leave to refer.

XII.

That by an instrument in writing duly executed and delivered on or about the —— day of ——, ——, and recorded in the United States Patent Office on the 17th day of May, 1919, in Liber D107 of Transfers of Patents, and for a valuable consideration, the said David F. Shope sold and assigned the entire right, title and interest in and to said application, serial No. 174,511, and the letters patent that might be granted thereon, to the said [9] Shope Brick Company, the plaintiff herein; and the plaintiff prays that said instrument in writing may be deemed and taken as a part of this bill and to the original of the same, or to a duly authenticated copy thereof, ready in court to be produced, the plaintiff prays leave to refer.

XIII.

That on the 17th day of June, 1919, upon due proceedings had and in full compliance with the statutes of the United States in such cases made and provided, letters patent of the United States bearing date on that day, and numbered 1,306,977, were issued on said application, serial No. 174,511 made by David F. Shope, to said Shope Brick Company of Portland, Oregon, under the seal of the Patent Office of the United States; were signed by the Commissioner of Patents; were recorded in the books of the Patent Office kept for that purpose; and were delivered to said Shope Brick Company, its successors and assigns, for the term of seventeen

years from the 17th day of June, 1919, granting the exclusive right to make, use and sell the said invention throughout the United States and the territories thereof; and the plaintiff prays that said letters patent may be deemed and taken as part of this bill; and to the original of the same, or a duly authenticated copy thereof, ready in court to be produced, the plaintiff prays leave to refer.

XIV.

That the plaintiff has been ever since the respective dates of the said instruments in writing assigning said patent applications and said patents to the plaintiff, and during the time of the infringement hereinafter complained of, and now is, the sole and exclusive owner of said letters patent Nos. 985,709, 1,270,450 and 1,306,977, and is entitled to all the rights, interest and privileges accrued thereby, and to all damages and profits for any [10] and all infringements thereof.

XV.

That said defendants, well knowing the premises and having had knowledge of the letters patent No. 985,709, 1,270,450 and 1,306,977, and the rights secured to your orator, as aforesaid, by contriving to injure complainant and to deprive it of the benefits and advantages which might and otherwise would accrue unto complainant from said invention after the issuing of the letters patent above described, and after vesting of same in your complainant, as aforesaid, and before the commencement of this suit, did, as your orator is informed and believes, without the license and allowance and against the will of your orator and in violation of complainant's rights and

in infringement of the aforesaid letters patent, within the District of Oregon, and particularly at the plant of said defendants in the city of Portland, county of Multnomah, State of Oregon, unlawfully and wrongfully and in defiance of the rights of complainant, manufacture and/or use and/or sell, and are now continuing to manufacture, use and/or sell and assist or aid others to use, and now continue to use, aid, sell and/or assist others to use plaintiff's said patented methods, apparatus, processes and brick-making machines and faced brick and cement blocks, all of which have been made according to and contain said invention and patented processes, mentioned and described in said patents, or containing or embodying or employing the improvements, or substantial or material parts thereof in defiance of the rights acquired by and secured exclusively to your complainant by said patents.

XVI.

Said defendants have made and realized profits and advantages from said acts and doings and but for which said unlawful and wrongful acts of defendants, the complainant would have made [11] additional gains, profits and advantages from the use of said patented improvements and would now be enabled to use the same patented improvements with greater profit and advantage, but to what extent and how much exactly, your orator does not know and prays a discovery thereof.

XVII.

Complainant has caused notice to be given to said defendants of said infringements and of the rights of your orator in the premises and requested them to desist and refrain therefrom; but the said defend-

ants have disregarded said notice and refused to desist from said infringements, and are continuing to use said new and useful invention and/or improvements thereon.

XVIII.

Defendants are now making faced brick, which are themselves and the means of making them are covered by patents hereinabove described, and now are intending to and are making faced bricks other than for your orator; and further the said defendants have avowed that they intend to continue said infringement by the making of said brick in other sections of the State of Oregon, to wit, Astoria, and in other sections of the United States, to wit, at Longview, Washington; and the acts and doings above described constitute a direct infringement of the patents above mentioned; that in and by reason of the above-described acts of said defendants, your orator has been particularly damaged in the sum of One Thousand Dollars ($1000.00).

WHEREFORE, inasmuch as your orator has no adequate relief except in this court of equity, prays to the end that defendants

(1) May, if they can show cause why the plaintiff should not have the relief herein prayed, and shall make full, true and perfect disclosure, answer and discovery of all the matters aforesaid, [12] but not under oath, answer under oath being expressly waived, according to their best knowledge, remembrance, information and belief, as to the several matters herein set forth, as fully and particularly as if the same were herein repeated paragraph by paragraph, and the defendants interrogated thereon.

(2) May be compelled, by decree of this honorable Court, to account for and pay over unto the complainant, all gains and profits as have accrued or been earned or received by said defendants by reason of said infringement of said patents, and all such gains and profits as the complainant would have received but for the said wrongful acts and doings of said defendants, and all damages that the plaintiff has sustained thereby in, to wit, the sum of $1000.00.

(3) That said brick now in defendants' possession should be held and retained in the possession of the Court to be either finally destroyed or placed in possession of your orator.

(4) That said defendants and their agents, attorneys, servants, employees, and any and all persons acting by, through or under said defendants or their attorneys, may be perpetually enjoined and restrained by a decree of this Honorable Court from directly or indirectly using or causing to be used, any faced brick or devices or processes or structures or methods embodying or employing or according to the processes of said patented inventions or a substantial or material part thereof, or from infringing upon or violating said letters patent.

(5) That said defendants may be enjoined and restrained *pendente lite* by a writ of provisional or preliminary injunction, issuing out of and under the seal of this Honorable Court, to the same purport and tenor and effect as herein prayed for with regard to said perpetual injunction.

(6) That this Honorable Court may increase the actual [13] damages so assessed to a sum equal to three times the amount so assessed under the cir-

cumstances of the wilful and unjust infringements by said defendants, as herein set forth; and

(7) That said defendants may be decreed to pay the costs and disbursements of this suit; and that plaintiff may have such other, further and different relief as to this Court may seem meet and just in equity.

SHOPE BRICK COMPANY.
By D. F. SHOPE,
President.

ROBERT R. RANKIN,
Solicitor for Plaintiff.

Filed August 4, 1923. G. H. Marsh, Clerk. [14]

AND AFTERWARDS, to wit, on the 27th day of August, 1923, there was duly filed in said court an answer, in words and figures as follows, to wit: [15]

In the District Court of the United States for the District of Oregon.

IN EQUITY—No. E.—8661.

SHOPE BRICK COMPANY, a Corporation,
Complainant,

vs.

ROY WARD and OTTO PETERSON, Individually, and ROY WARD and OTTO PETERSON, Copartners, Doing Business Under the Firm Name and Style of WARD & PETERSON, Copartners,

Defendants.

ANSWER.

The joint and several answers of the defendants Roy Ward and Otto Peterson, individually and as copartners, doing business under the firm name and style of Ward & Peterson.

I.

The defendants admit that they are residents of the city of Portland, county of Multnomah, State and District of Oregon and as partners have been and now are engaged in the business of manufacturing cement brick, both common and color faced, and hearth tile at their plant at No. 1751 East Ninth Street in the city of Portland, county of Multnomah, State of Oregon, and have been operating as a copartnership under the assumed name and style of Ward & Peterson; but as to whether Shope Brick Company is a corporation organized under and existing by virtue of the laws of the State of Oregon, with its principal office and place of business located in the city of Portland, County of Multnomah, State of Oregon, the defendants are without knowledge.

II.

The defendants deny that prior to the 9th day of October, 1909, or at any time, David F. Shope was the true, first, sole or original inventor or discoverer of any new or useful improvements in processes or methods of waterproofing cement blocks, which were not known or used by others in this country, or which were not patented or described or illustrated in any printed publication [16] in this or any foreign country before the alleged invention or discovery thereof, or more than two years prior to the

alleged application for letters patent of the United States therefor, or which were not in public use or on sale for more than two years prior to said application; the defendants deny any knowledge as to whether said alleged improvements had not been abandoned; and the defendants deny that David F. Shope was or has ever been the true or first or sole or original inventor or discoverer of any new or useful improvement whatsoever in processes or methods of waterproofing cement blocks.

As to whether no application for letters patent of any foreign country for said alleged invention or discovery was filed by the said David F. Shope or his legal representatives or assigns more than twelve months prior to the filing of the application therefor in the United States, the defendants have no knowledge and therefore deny the same.

III.

The defendants deny that on the 9th day of October, 1909, or at any time, David F. Shope was the true, first, sole, or original inventor or discoverer of any improvements whatsoever in brick making, and deny that said David F. Shope on the 9th day of October, 1909, or at any time, made any application in writing or otherwise to the Commissioner of Patents of the United States or otherwise for the grant of letters patent for any improvements in processes or methods of waterproofing cement blocks or for any improvements in brick making.

The defendants admit that said David F. Shope, on the 9th day of October, 1909, made application for letters patent of the United States for alleged improvements in methods of waterproofing cement blocks and that said application was known and de-

scribed as serial No. 521796, but as to whether the said David F. [17] Shope paid the fees required by law therefor, the defendants have no knowledge; the defendants deny that in making or filing said application, serial No. 521,796, the said David F. Shope duly or at all complied with the conditions or requirements of the then existing statutes of the United States or the rules of the Patent Office of the United States.

IV.

The defendants deny that, prior to the 28th day of November, 1917, or at any time, David F. Shope was the true, first, sole, or original inventor or discoverer of any new or useful improvements in processes of waterproofing or ornamenting objects such as cement blocks, which were not known or used by others in this country, or which were not patented or described or illustrated in any printed publication in this or any foreign country prior to the alleged invention or discovery thereof, or more than two years prior to the application for letters patent of the United States therefor, or which were not in public use or on sale for more than two years prior to said application; the defendants deny any knowledge as to whether said alleged improvements had not been abandoned; and the defendants deny that David F. Shope was or has been at any time the true or first or sole or original inventor or discoverer of any new or useful improvements in processes of waterproofing or ornamenting objects or objects such as cement blocks.

As to whether no application for letters patent of any foreign country for said alleged invention or discovery in processes of waterproofing and orna-

menting objects such as cement blocks was filed by the said David F. Shope or his legal representatives or assigns more than twelve months prior to the filing of the said alleged application therefor in the United States, the defendants have no knowledge and therefore deny the same. [18]

V.

The defendants deny that on the 28th day of November, 1917, or at any other time, David F. Shope made any application in writing or otherwise to the Commissioner of Patents of the United States, or otherwise, for the grant of letters patent for any improvement in processes of waterproofing or ornamenting objects or objects such as cement blocks.

The defendants admit that the said David F. Shope, on the 29th day of November, 1917, made application for letters patent of the United States for alleged improvements in processes of waterproofing and ornamenting objects such as cement blocks, and that said application was known and described as serial No. 204,320, but as to whether the said David F. Shope paid the fees required by law therefor the defendants are without knowledge; the defendants deny that David F. Shope in making or filing said application, serial No. 204,320, duly or at all complied with the conditions or requirements of the then existing statutes of the United States or the rules of the Patent Office.

VI.

The defendants deny that prior to the 13th day of June, 1917, or at any other time, David F. Shope was the true, first, sole, or original inventor or discoverer of any new or useful improvements in brick-making machines, which were not known or used by

others in this country, or which were not patented or described or illustrated in any printed publication in this or any foreign country before his alleged invention or discovery thereof, or more than two years prior to his alleged application for letters patent of the United States therefor, or which were not in public use or on sale for more than two years prior to said alleged application; the defendants deny any knowledge as to whether said alleged improvements had not been abandoned; and the defendants deny that [19] David F. Shope was or has been at any time the true or first or sole or original inventor or discoverer of any new or useful improvements in brick-making machines.

As to whether no application for letters patent of any foreign country for said alleged invention or discovery of improvements in brick-making machines was filed by the said David F. Shope, or his legal representatives or assigns, more than twelve months prior to said application therefor in the United States, the defendants have no knowledge and therefore deny the same.

VII.

The defendants deny that on the 13th day of June, 1917, or at any other time, David F. Shope made any application in writing or otherwise to the Commissioner of Patents of the United States or otherwise for the grant of letters patent for any improvements in brick-making machines.

The defendants admit that said David F. Shope, on the 13th day of June, 1917, made application for letters patent of the United States for alleged improvements in brick-making machines and that said application was known and described as

serial No. 174,511, but as to whether the said David F. Shope paid the fees required by law therefor the defendants are without knowledge; the defendants deny that in making or filing application, David F. Shope duly or at all complied with the conditions or requirements of the then existing statutes of the United States, or the rules of the Patent Office of the United States, in such cases made and provided.

VIII.

The defendants admit that on the 28th day of February, 1911, letters patent of the United States bearing date on that day and numbered 985,709 were issued on said application serial No. 521,796 to David F. Shope; the defendants deny that said letters patent [20] were issued upon due proceedings or in full or any compliance with the statutes of the United States in such cases made and provided; but as to whether said letters patent were issued under the seal of the Patent Office of the United States or were signed by the Commissioner of Patents, or were recorded in the books of the Patent Office kept for that purpose, or were delivered to said David F. Shope for the term of 17 years, or for any other term, the defendants have no knowledge and therefore deny the same.

The defendants deny that any valid letters patent were issued or delivered to the said David F. Shope at any time, on said application serial No. 521,796 or otherwise, and in regard thereto the defendants allege that said alleged letters patent No. 985,709 at the time they were issued were and ever since have been and now are null and void; and the defendants deny that said alleged letters patent No. 985,709

granted the exclusive or any right to make or use or sell the alleged invention or discovery mentioned therein throughout the United States or the territories thereof or in any part thereof or in the State of Oregon or in the State of Washington.

IX.

The defendants have no knowledge as to whether the said David F. Shope at any time sold or assigned to the complainant herein the entire or any right, title or interest of the said David F. Shope in or to said letters patent No. 985,709 or all or any of the alleged right or alleged cause of action for damages that may have accrued to said David F. Shope by virtue of said letters patent or alleged infringements thereof; and the defendants further deny that the complainant has ever become or now is the owner of any rights whatsoever under and by virtue of the said letters patent No. 985,709.

X.

As to whether at any time the said David F. Shope sold [21] or assigned the entire or any right, title or interest in and to said application serial No. 204,320, or the letters patent that might be granted thereon to the complainant herein, the defendants have no knowledge and therefore deny the same.

XI.

The defendants admit that on the 25th day of June, 1918, letters patent of the United States bearing date on that day and number 1,270,450 were issued on said application serial No. 204,320 to David F. Shope; the defendants deny that said letters patent were issued upon due proceedings or in full or any compliance with the statutes of the United States in such cases made and provided; but as to whether

the said letters patent were issued under the seal of the Patent Office of the United States, or were signed by the Commissioner of Patents, or were recorded in the books of the Patent Office kept for that purpose, or were delivered to the said David F. Shope for the term of 17 years, or for any other term, from the 25th day of June, 1918, the defendants have no knowledge and therefore deny the same.

The defendants deny that any valid letters patent were issued or delivered to the said David F. Shope at any time on said application serial No. 204,320 or otherwise; and in regard thereto the defendants allege that said letters patent No. 1,270,450 at the time they were issued were and ever since have been and now are null and void; and the defendants deny that said alleged letters patent No. 1,270,450 granted the exclusive or any right to make or use or sell the alleged invention throughout the United States or the territories thereof, or in any part thereof, or in the State of Oregon or in the State of Washington.

XII.

As to whether at any time the said David F. Shope sold or assigned to the complainant the entire or any right, title or [22] interest in or to said application serial No. 174,511 or to the letters patent that might be granted thereon, the defendants have no knowledge and therefore deny the same.

XIII.

The defendants admit that on the 17th day of June. 1919, letters patent of the United States, bearing date on that day and numbered 1,306,977 were issued on application serial No. 174,511 to the complainant; the defendants deny that said letters patent were issued upon due proceedings had *or* in

full or any compliance with the statutes of the United States in such cases made and provided; but as to whether said letters patent were under the seal of the Patent Office of the United States, or were signed by the Commissioner of Patents, or were recorded in the books of the Patent Office kept for that purpose, or were delivered to the complainant, its successors or assigns, for the term of 17 years, or for any other term, from the 17th day of June, 1919, the defendants have no knowledge.

The defendants deny that any valid letters patent were issued or delivered to the complainant or to any other person on said application serial No. 174,511 or otherwise, and in regard thereto the defendants allege that said letters patent No. 1,306,977 at the time they were issued were and ever since have been and now are null and void; and the defendants deny that said alleged letters patent No. 1,306,977 granted the exclusive or any right to make or use or sell the said alleged invention throughout the United States or the territories thereof, or in any part thereof or in the State of Oregon, or in the State of Washington.

XIV.

As to whether the complainant has been at any time or is now the sole or exclusive owner of said alleged letters patent No. 985,709, No. 1,270,450 and No. 1,306,977, or either or any thereof, [23] or of any right, title or interest therein, the defendants have no knowledge and therefore deny the same.

The defendants deny that the complainant is en-

titled to any rights, interest or privileges under or accrued under said alleged letters patent or any thereof or to any damages or profits for any infringements thereof.

XV.

The defendants deny that they or either of them have at any time infringed or now are infringing on the alleged letters patent mentioned in complainant's bill, or any thereof, or on the pretended rights of complainant thereunder in the District of Oregon or in or at any other place.

The defendants deny that they or either of them have had at any time or now have any knowledge of any rights secured to the complainant by reason of the said alleged letters patent, and deny that the defendants or either of them have *contrived* at any time to injure the complainant or to deprive it of any benefits or advantages which might or would or could accrue unto complainant from said alleged patents or said alleged inventions.

The defendants deny that they or either of them have in violation of any rights of complainant or in any infringement of the aforementioned letters patent, within the District of Oregon or at the defendant's plant in the city of Portland, or in or at any other place whatsoever, manufactured or used or sold or assisted or aided others to use any of complainant's alleged patented methods, apparatus, process, brick-making machines, or faced bricks or cement blocks, or any patent methods or processes of the complainant whatsoever; the defendants deny that they or either of them are now continuing to

manufacture, use, or sell, or are continuing to assist or aid others to use any of complainant's alleged patented methods, apparatus, processes, brick-making machines, [24] or faced bricks or cement blocks or any of complainant's alleged patent methods or processes whatsoever; the defendants deny that they or either of them have at any time manufactured or used or sold or aided or assisted others to use any of complainant's alleged patent methods, apparatus, processes, brick-making machines, or faced brick or cement blocks, any of which have been made in any manner according to or which contain any alleged inventions or patented processes mentioned or described in the patents mentioned in complainant's bill, or containing or embodying or employing any of the improvements or substantial or material parts thereof, in defiance of any rights acquired by and secured to the complainant by said patents, or otherwise.

XVI.

The defendants deny that they or either of them have made or realized any profits or advantages whatsoever from the alleged or any infringement of complainant's alleged patents or either or any thereof; the defendants deny that but for any acts of the defendants or either of them the complainant would have made additional gains or profits or advantages from the use of the alleged patented improvements mentioned in its bill of complaint; and the defendants deny that but for any acts of theirs the complainant would now be enabled to use the alleged patented improvements with greater or any profits or advantage.

XVII.

The defendants admit that the complainant has attempted to force the defendants to desist and refrain from engaging in the business now conducted by the defendants in the city of Portland and that the defendants have disregarded said notice, but the defendants deny that they or either of them have used at any time or are continuing to use any new or useful inventions or improvements belonging to complainant or any other person. [25]

XVIII.

The defendants admit that they are now making faced brick and are intending to continue to make faced brick, but the defendants deny that any faced brick made or intended to be made by them were or are or will be covered by any of the patents set forth in complainant's bill or by any other patents whatsoever; the defendants deny that the means of making their faced brick are covered by any of the patents mentioned in complainant's bill; the defendants deny that they or either of them intend to infringe at any place any patent rights belonging to complainant or to any other person or that they have avowed that they intend so to do; the defendants deny that any acts or doings of theirs or either of them constitute a direct or any infringement of the patents mentioned in complainant's bill; the defendants deny that the complainant has by any acts of theirs or either of them in any manner been damaged in the sum of $1000.00, or in any other sum whatsoever.

XIX.

And defendants further answering, deny that

David F. Shope was the true, original or first inventor or discoverer of the alleged improvements in processes or methods of waterproofing cement blocks covered by said patent No. 985,709; and they further aver that said methods and processes and alleged improvements in said patent described were not an invention or discovery when produced by said David F. Shope and that they were not novel or new at that time and that in the state of the art or subject then existing it required not invention but only mechanical skill to produce said alleged improvements, and the same when produced by the said David F. Shope were not patentable, and were devoid of patentable novelty.

XX.

And defendants further answering, deny that David F. [26] Shope was the true, original or first inventor or discoverer of the alleged improvements in processes of waterproofing and ornamenting objects or objects such as cement blocks, covered by said patent No. 1,270,450; and the defendants aver that said methods, processes, and alleged improvements in said patent described were not an invention or discovery when produced by said David F. Shope and that they were not novel or new at that time and that in the state of the art or subject then existing it required not invention, *by* only mechanical skill to produce said alleged improvements, and the same when produced by the said David F. Shope were not patentable and were devoid of patentable novelty.

XXI.

And defendants further answering deny that

David F. Shope was the true, original or first inventor, or discoverer of the alleged improvements in brick making machines, covered by said patent No. 1,306,977; and the defendants aver that said device and alleged improvements in said patent described were not an invention or discovery when produced by said David F. Shope and that they were not novel at that time and that in the state of the art or subject then existing it required not invention but only mechanical skill to produce the same, and that the same when produced by said David F. Shope were not patentable and were void of patentable novelty.

That said alleged improvements in said patent No. 1,306,977 concerns an art or subject which was highly developed before said David F. Shope entered the field thereof with his alleged improvement, as shown by various patents of the United States duly published; that defendants are informed and believe and therefore aver that among said patents issued prior to the issuance of patent No. 1,306,977 were patents issued on January 24, 1905, February 14, 1905, November 7, 1905, and January 29, 1907; that information [27] concerning said previous patents has not come to defendants in time to set forth the details thereof in this answer, but the defendants are causing due search to be made and will disclose the same by amendment to this answer, or otherwise, as the Court may determine, upon having ascertained the same. Therefore, if the alleged improvements of said David F. Shope did constitute any invention

it was of a very narrow, specific and limited character, and must be construed accordingly in order not to encroach upon the rights which were vested in the general public prior to and at the time said David F. Shope entered the field of said art or subject.

WHEREFORE, the defendants pray that the bill of complaint herein be dismissed, and that they recover from complainant their costs and disbursements.

ROY WARD,
OTTO PETERSON,
Defendants.

COLLIER, COLLIER & BERNARD,
E. J. BERNARD,
Solicitors for Defendants.

Filed August 27, 1923. G. H. Marsh, Clerk. [28]

AND AFTERWARDS, to wit, on the 5th day of December, 1923, there was duly filed in said court an amendment to answer, in words and figures as follows, to wit: [29]

In the District Court of the United States for the District of Oregon.

IN EQUITY—E.—8661.

SHOPE BRICK COMPANY, a Corporation,
Complainant,

vs.

ROY WARD and OTTO PETERSON, Individually, and ROY WARD and OTTO PETERSON, Copartners, Doing Business Under the Firm Name and Style of WARD & PETERSON, Copartners,
Defendants.

AMENDMENT OF ANSWER.

Now come the defendants, Roy Ward and Otto Peterson, individually, and as copartners, doing business under the firm name and style of Ward and Peterson, and, by leave of the Court first had and obtained, amend their joint and several answer by striking out the last paragraph on page 13 of said answer after sentence ending line 11 on said page, and adding the following matter to wit:

XXII.

Defendants are informed and believe and therefore allege that the said David F. Shope was not the original or first inventor or discoverer of the invention purporting to be covered by the said letters patent, or of any material or substantial parts thereof, and that the same, or material or substantial parts thereof had been described and

illustrated in printed publications and patents prior to the date of the supposed invention of the said David F. Shope, and more than two years prior to his application for letters patent.

Defendants specify instances of such prior publication as follows, to wit: [30]

PUBLICATIONS ANTICIPATORY OF AFORESAID PATENT IN SUIT, NAMELY, NUMBERED 985,709, ISSUED FEBRUARY 28, 1911, TO DAVID F. SHOPE.

UNITED STATES LETTERS PATENT.

No. 115,475 issued May 30, 1871, to William Wheeler Hubbell.

No. 461,890 issued October 27, 1891, to George Richardson.

No. 518,239 issued April 17, 1894, to Edward Goode.

No. 527,416 issued October 16, 1894, to Antonio Federici.

No. 531,842 issued January 1, 1895, to William J. Haddock.

No. 587,484 issued August 3, 1897, to Johann Jungbluth.

No. 624,563 issued May 9, 1899, to Charles W. Stevens.

No. 692,644 issued February 4, 1902, to Frederic M. Emerson.

No. 703,644 issued July 1, 1902, to Edward Davies.

No. 723,281 issued March 24, 1903, to William E. Jaques.

No. 748,611 issued January 5, 1904, to William E. Jaques.

No. 751,089 issued February 2, 1904, to Frederick A. Malette.

No. 777,073 issued December 13, 1904, to Earl A. Brownson.

No. 814,358 issued March 6, 1906, to James J. Cox.

No. 818,286 issued April 17, 1906, to William Porten.

No. 829,249 issued August 21, 1906, to George H. Bartlett.

No. 833,952 issued October 23, 1906, to George Brown.

No. 850,670 issued April 16, 1907, to Timothy W. McClenahan.

No. 886,124 issued April 28, 1908, to John C. Henderson.

No. 958,194 issued May 17, 1910, to Augustus O. Thomas.

BRITISH LETTERS PATENT.

No. 2242, issued to Edward Butler, June 5, 1878.

No. 6952, issued to —— Kellner, May 6, 1890.

PUBLICATIONS ANTICIPATORY OF AFORESAID PATENT IN SUIT, NAMELY, NUMBER 1,270,450, ISSUED JUNE 25, 1918, TO DAVID F. SHOPE.

UNITED STATES LETTERS PATENT.

No. 115,475, issued May 30, 1871, to William Wheeler Hubbell.

No. 703,644, issued July 1, 1902, to Edward Davies.

No. 818,286, issued April 17, 1906, to William Porten.

No. 833,952, issued October 23, 1906, to George Brown.

No. 954,694, issued April 12, 1910, to Henry Desborough Phillips.

No. 985,709, issued February 28, 1911, to David F. Shope.

No. 1,160,708, issued November 16, 1915, to Gaulosher and Stacy.

PUBLICATIONS ANTICIPATORY OF AFORESAID PATENT IN SUIT, NAMELY, NUMBER 1,306,977, ISSUED JUNE 17, 1919, TO DAVID F. SHOPE.

UNITED STATES LETTERS PATENT.

All those cited by the Patent Office as set forth in the file wrapper and contents of the said patent, and particularly, No. 804,169, issued November 7, 1905, to William Porten, and other prior patents and publications which these defendants crave leave to produce at any hearing of this case, upon proper notice and supplemental pleadings, as soon as they are more fully [31] informed in the premises.

XXIII.

Defendants allege that the letters patent sued upon are, in all respects material to this cause, invalid for want of patentable invention.

WHEREFORE, these defendants, having fully answered to the said bill of complaint in so far as they are advised the same is material or necessary to be answered unto, deny that the said plaintiff is entitled to the relief or any part thereof in the said bill of complaint demanded, or any relief whatsoever, and pray to be hence dismissed with their reasonable charges in this behalf most wrong-

fully sustained, and such other relief as the Court may deem just and equitable.

ROY WARD,
OTTO PETERSON,
WARD & PETERSON,
Defendants.
By ATKINS & ATKINS,
Attorneys.

Filed December 5, 1923. G. H. Marsh, Clerk. [32]

AND AFTERWARDS, to wit, on the 13th day of May, 1924, there was duly filed in said court a stipulation relative to exhibits to be used at the trial, in words and figures as follows, to wit: [33]

In the District Court of the United States for the District of Oregon.

IN EQUITY.—E.—8661.

SHOPE BRICK COMPANY, a Corporation,
Complainant,

vs.

ROY WARD and OTTO PETERSON, Individually, and ROY WARD and OTTO PETERSON, Copartners, Doing Business Under the Firm Name and Style of WARD & PETERSON, Copartners,
Defendants.

STIPULATION RE EXHIBITS TO BE USED AT TRIAL.

The following stipulation is hereby entered into by and between counsel for the respective parties.

First. That at the trial of this cause printed, photostat, or lithographed copies of all reference patents, domestic or foreign, furnished by the United States Patent Office, and pleaded or introduced to illustrate the prior art, to define the scope of the patent, shall be accepted in evidence without certification, when offered by either party, with the same force and effect as if they had been certified, subject only to proof of inaccuracy, if any, and to their competency and relevancy.

Second. That the defendants shall be permitted for the purpose of demonstration only in this case, to make bricks or the like which they are enjoined by order of this Court from making, and that the making of such bricks or the like shall not be held to constitute a violation of the preliminary injunction heretofore issued by the Court in this case.

ROBERT R. RANKIN,
Attorney for Plaintiff.
ATKINS & ATKINS,
Attorneys for Defendants.

Approved this 13th day of May, 1924.

CHAS. E. WOLVERTON,
Judge.

Filed May 13, 1924. G. H. Marsh, Clerk. [34]

AND AFTERWARDS, to wit, on Tuesday, the 13th day of May, 1924, the same being the 62d judicial day of the regular March term of said court—Present, the Honorable CHARLES E. WOLVERTON, United States District Judge, presiding—the following proceedings were had in said cause, to wit: [35]

In the District Court of the United States for the District of Oregon.

No. E.—8661.

May 13, 1924.

SHOPE BRICK COMPANY

vs.

ROY WARD and OTTO PETERSON.

MINUTES OF COURT—MAY 13, 1924—MOTION FOR ORDER RE STIPULATION.

Now at this day comes the plaintiff by Mr. R. R. Rankin, of counsel, and submits to the Court a stipulation signed by attorneys for the respective parties hereto, and moves the Court for an order in accordance with said stipulation. Upon consideration whereof,

IT IS ORDERED that at the trial of this cause printed, photostat, or lithographed copies of all reference patents, domestic or foreign, furnished by the United States Patent Office, and pleaded or introduced to illustrate the prior art, to define the scope of the patent, shall be accepted in evi-

dence without certification, when offered by either party, with the same force and effect as if they had been certified, subject only to proof of inaccuracy, if any, and to their competency and relevancy; and that the defendants shall be permitted for the purpose of demonstration only in this case, to make bricks or the like which they are enjoined by the order of this Court from making, and that the making of such bricks or the like shall not be held to constitute a violation of the preliminary injunction heretofore issued by the Court in this case.

CHAS. E. WOLVERTON,
Judge.

Filed May 13, 1924. G. H. Marsh, Clerk. [35½]

AND AFTERWARDS, to wit, on the 9th day of June, 1924, there was duly filed in said court an opinion, in words and figures as follows, to wit: [36]

In the District Court of the United States for the District of Oregon.

No. E.—8661.

SHOPE BRICK COMPANY,
Complainant,

vs.

ROY WARD and OTTO PETERSON,
Defendants.

Portland, Oregon, June 9, 1924.

OPINION.

R. S. BEAN, District Judge (Oral).

This is a suit for infringement of patent issued to plaintiff's assignee in February, 1911. The patent covers a process for waterproofing cement brick or cement blocks, and consists of the covering of the face of the block with water, then applying pure cement and by agitating forcing the solution or mixture into the pores of the block, thus making it waterproof.

There are two questions raised by the defendant: First, that they have not infringed this patent, and second, that the plaintiff was not the original inventor of the patent process. Now, as far as the first question is concerned, there is, in my judgment, no room for controversy about the infringement. The process used by the defendant was substantially the same as that covered by the patent, so if the patent is valid there is in my judgment no question about the infringement.

Now, the patent is the first one issued covering this method or this process. There were prior patents issued for covering cement blocks with cement, but it was either under pressure or by simple dipping, but the process described in plaintiff's patent is not anywhere disclosed directly by the prior art, and the rule is that the granting of a patent is *prima facie* evidence that the patentee is the first inventor, and of its novelty, and the burden of proof is on one who assails the patent for want of novelty, and many authorities have stated that every reasonable doubt should be resolved against him. Now, in view

of that rule as I interpret this record, it has not been shown clearly that the patentee was not the original and first inventor of this process, and for that reason it seems to me that the plaintiff is entitled to the relief demanded in his prayer.

Filed June 9, 1924. G. H. Marsh, Clerk. [36½]

AND AFTERWARDS, to wit, on Monday, the 9th day of June, 1924, the same being the 84th judicial day of the regular March term of said Court—Present, the Honorable ROBERT S. BEAN, United States District Judge, presiding—the following proceedings were had in said cause, to wit: [37]

In the District Court of the United States for the District of Oregon.

No. E.—8661.

SHOPE BRICK COMPANY, a Corporation,
Complainant,

vs.

ROY WARD and OTTO PETERSON, Individually, and ROY WARD and OTTO PETERSON, Copartners, Doing Business Under the Firm Name of WARD & PETERSON, Copartners,
Defendants.

MINUTES OF COURT—JUNE 9, 1924—DECREE.

At the March Term of the District Court of the United States for the District of Oregon, held at the United States Courtroom, in the City of Portland, State of Oregon, on the 27th day of May, 1924—Present: Honorable ROBERT S. BEAN, District Judge.

This cause came on to be heard at the March term of the said court on the 27th day of May, 1924, and was continued to and concluded upon the 28th day of May, 1924, and thereafter continued until the present date under advisement, and thereupon, under consideration thereof, it was

ORDERED, ADJUDGED AND DECREED as follows:

That letters patent No. 985,709, entitled, method of waterproofing cement blocks, granted and issued on the 28th day of February, 1911, to David F. Shope, and referred to in the bill of complaint herein, is good and valid as respects all of the specifications thereof.

That said David F. Shope was the first, true, sole and original inventor and discoverer of each and all of the claims mentioned and described in the said patent No. 985,709.

That the said inventions as described in said claims were new and useful inventions that were neither known nor used by others in this or any foreign country before the invention and discovery thereof by the said David F. Shope, and which were never patented or described in this or any foreign country before the invention and discovery thereof by

the said David F. Shope, or more than two years before the application for the United States [38] letters patent therefor, and at the time of the application for United States letters patent therefor, the same had not been in public use or on sale.

That before the infringements complained of in the bill of complaint, the Shope Brick Company, a corporation organized under and existing by virtue of the laws of the State of Oregon, had become and was and still is the sole owner of said Patent No. 985,709, as alleged in the bill of complaint, by assignment duly recorded in the Patent Office of the United States; that all of the inventions and improvements mentioned and described in the patent No. 985,709 have been and are now used by the complainant and also by the defendants in the infringement complained of in said bill of complaint.

That said defendants Roy Ward and Otto Peterson, individually, and Roy Ward and Otto Peterson, copartners, doing business under the firm name and style of Ward & Peterson, copartners, infringed upon said letters patent No. 985,709, and upon the exclusive rights of the complainant under the same; that is to say, by making, using and selling blocks, bricks and artificial structures embodying the inventions and improvements patented as aforesaid and as charged in the bill of complaint.

And it is further ordered, adjudged and decreed that complainant does recover of the defendants the profits, gains and advantages which the said defendants, or either of them, have received or made, or which have arisen or accrued to them, or either of them, in their individual or partnership capacity by the manufacture, use or sale of the said bricks

or blocks or artificial structures, processed in the manner described in and in violation of the said letters patent, since the 1st day of January, 1923; and that the complainant does recover the damages resulting from said infringement. [39]

And it is further ordered, adjudged and decreed that complainant does recover of the defendants its costs, charges and disbursements in this suit to be taxed.

And it is further ordered, adjudged and decreed that it be referred to Robert Maguire as Master in Chancery, his experience in such matters being found by the Court sufficient reason for such appointment, to ascertain, take and state, and report to the Court, an account of the number of bricks, blocks and artificial structures embodying the said inventions and improvements and each thereof, described and secured in said letters patent, made, used, or sold by said defendants; and also the gains, profits and advantages which the said defendants have received or which have arisen or accrued to them, or either of them, since the 1st day of January, 1923, from infringing the said exclusive rights of said complainant by the manufacture, use or sale of the said inventions and improvements in the said letters patent, and the damages which the complainant has suffered by said infringements.

And it is further ordered, adjudged and decreed that the complainant, on such accounting, have the right to cause the examination of said defendants, or either of them, *ore tenus,* or otherwise; and also the production of the books, vouchers or documents of the said defendants; and that they and each of

them attend for such purpose before the said Master in Chancery as the said Master shall direct.

And it is further ordered, adjudged and decreed that a perpetual injunction be issued in this suit against the said defendants and each of them, restraining them, their agents, clerks, servants, or all claiming by, through or under them, from making or selling, or in any way using or disposing of bricks, blocks, or artificial structures, embracing the inventions or improvements described in said letters patent, pursuant to the prayer of the [40] said bill of complaint.

And jurisdiction is hereby retained for the purpose of making and enforcing any additional order or orders as may be deemed necessary relative to this suit, and to enforce compliance to this decree.

Dated at Portland, Oregon, this 9th day of June, 1924.

R. S. BEAN,
United States District Judge.

Filed June 9, 1924. G. H. Marsh, Clerk. [41]

AND AFTERWARDS, to wit, on the 14th day of June, 1924, there was duly filed in said court a petition for appeal, in words and figures as follows, to wit: [42]

In the District Court of the United States for the District of Oregon.

No. E.—8661.

SHOPE BRICK COMPANY, a Corporation,
Complainant,

vs.

ROY WARD and OTTO PETERSON, Individually, and ROY WARD and OTTO PETERSON, Copartners, Doing Business Under the Firm Name of WARD & PETERSON, Copartners,
Defendants.

PETITION ON APPEAL.

The above-named defendants, Roy Ward and Otto Peterson, doing business under the firm name of Ward and Peterson, considering themselves aggrieved by the decree entered in the above-entitled cause under date of June 9, 1924, whereby this Court did adjudge and decree that letters patent of the United States, No. 985,709 granted to David F. Shope, February 28, 1911, for improvements in methods of waterproofing cement blocks and assigned to the plaintiff herein, are good and valid in law; that the defendants have infringed the same; and that the plaintiff shall have the relief demanded in its prayer with costs.

Therefore, the defendants do hereby appeal from said decree and each and every part thereof, for the reasons set forth in the assignment of errors filed herewith, to the United States Circuit Court of

Appeals for the Ninth Circuit, and pray that this appeal may be allowed and that a transcript of the record and proceedings, upon which said decree was made, duly authenticated, may be sent to said Court of Appeals, together with the exhibits in this case.

Dated June 14, 1924.

ATKINS & ATKINS,
JOSEPH L. ATKINS,
LEICESTER B. ATKINS,
Attorneys for Defendants.

Filed June 14, 1924. G. H. Marsh, Clerk. [43]

AND AFTERWARDS, to wit, on the 14th day of June, 1924, there was duly filed in said court an assignment of errors, in words and figures as follows, to wit: [44]

In the District Court of the United States for the District of Oregon.

No. E.—8661.

SHOPE BRICK COMPANY, a Corporation,
Complainant,

vs.

ROY WARD and OTTO PETERSON, Individually, and ROY WARD and OTTO PETERSON, Copartners, Doing Business Under the Firm Name of WARD & PETERSON, Copartners,
Defendants.

ASSIGNMENT OF ERRORS.

Now, this 14th day of June, 1924, comes the above-named defendants by their solicitors and counsel, Atkins and Atkins, and say that the decree entered in the above-entitled cause on the 9th day of June, 1924, is erroneous and unjust to defendants:

I.

Because the District Court adjudged and decreed that the improvements described and claimed in the letters patent of the United States No. 985,709, granted to David F. Shope, February 28, 1911, for improvements in methods of waterproofing cement blocks, assigned to plaintiff and sued on herein, did involve invention and that said patent is valid.

II.

Because the District Court failed and refused to adjudge and decree that the said David F. Shope did not invent any new, useful, and patentable improvements in methods of waterproofing cement blocks as described and claimed in said letters patent.

III.

Because the District Court erred in not adjudging that said letters patent are void.

IV.

Because the District Court erred in failing and refusing to adjudge and decree that the invention as described and claimed in said letters patent is inoperative. [45]

V.

Because the District Court erred in failing and refusing to adjudge and decree that the very method employed by the defendants and complained of in the bill herein as constituting infringement of the

said letters patent sued on, was described in a claim which was presented by the patentee while his application for said letters patent was pending in the Patent Office and which was canceled by him after the Patent Office rejected said claim.

VI.

Because the District Court erred in adjudging and decreeing that said letters patent are valid, that the defendants infringed the same, and that the plaintiff as the assignee of said letters patent is entitled to relief from such infringement as prayed for in the bill herein.

VII.

Because the said decree of the District Court is in prejudice of the substantial rights and equities of the defendants in the premises.

Dated June 14, 1924.

ATKINS & ATKINS,
JOSEPH L. ATKINS,
LEICESTER B. ATKINS,
Attorneys and Counsel for Defendants.

Filed June 14, 1924. G. H. Marsh, Clerk. [46]

AND AFTERWARDS, to wit, on Tuesday, the 14th day of June, 1924, the same being the 91st judicial day of the regular March term of said Court—Present, the Honorable ROBERT S. BEAN, United States District Judge, presiding—the following proceedings were had in said cause, to wit: [47]

In the District Court of the United States for the District of Oregon.

No. E.—8661.

SHOPE BRICK COMPANY, a Corporation,
Complainant,

vs.

ROY WARD and OTTO PETERSON, Individually, and ROY WARD and OTTO PETERSON, Copartners, Doing Business Under the Firm Name of WARD & PETERSON, Copartners,
Defendants.

MINUTES OF COURT—JUNE 14, 1924—ORDER ALLOWING APPEAL.

On motion of counsel for the above-named defendants, it is

ORDERED that an appeal be and hereby is allowed to the United States Circuit Court of Appeals for the Ninth Circuit, from the final decree entered in the above-entitled cause on or about the 9th day of June, 1924, sustaining the bill of complaint and it is ordered that a transcript of the record and proceedings upon which said decree was made duly authenticated and the physical exhibits submitted in said cause be sent to said Circuit Court of Appeals.

IT IS FURTHER ORDERED that the defendant file a bond to be approved by this Court in the sum of Five Hundred Dollars, to answer all

costs on the appeal which may be adjudged or awarded against defendants if they shall fail to prosecute their appeal to effect and shall fail to make good their appeal.

Dated June 14, 1924.

R. S. BEAN,
Judge.

Filed June 14, 1924. G. H. Marsh, Clerk. [48]

AND AFTERWARDS, to wit, on the 16th day of June, 1924, there was duly filed in said court a bond on appeal, in words and figures as follows, to wit: [49]

HARTFORD ACCIDENT AND INDEMNITY COMPANY,

HARTFORD, CONNECTICUT.

In the District Court of the United States for the District of Oregon.

SHOPE BRICK COMPANY, a Corporation,
Plaintiff,

vs.

ROY WARD and OTTO PETERSON, Individually, and ROY WARD and OTTO PETERSON, Copartners, Doing Business Under the Firm Name of WARD & PETERSON, Copartners,
Defendants.

UNDERTAKING ON APPEAL.

WHEREAS, the defendants in the above-entitled action appeal to the United States Circuit Court of Appeals for the Ninth Circuit from a decree made and entered against them in the said cause in the said District Court of the United States for the District of Oregon against the defendants, Roy Ward and Otto Peterson, doing business as copartners under the firm name of Ward & Peterson, on the 9th day of June, 1924.

NOW, therefore, in consideration of the premises, and of such appeal, the undersigned, Hartford Accident and Indemnity Company, a corporation organized and existing under the laws of the State of Connecticut, and authorized under the laws of the State of Oregon to become surety on bonds, in the State of Oregon, does hereby jointly and severally undertake and promise, on the part of the appellant, that the said appellant will pay all costs on the appeal which may be adjudged or awarded against defendants if they shall fail to prosecute their appeal to effect and shall fail to make good their appeal.

HARTFORD ACCIDENT AND INDEMNITY COMPANY.
By DOW V. WALKER, (Seal)
Attorney-in-fact.

Countersigned:
WALKER, JEWETT & BARTON.
By DOW V. WALKER,
Agents.

Approved June 17, 1924.

R. S. BEAN,
Judge.

Filed June 16, 1924. R. H. Marsh, Clerk. [50]

AND AFTERWARDS, to wit, on the 16th day of June, 1924, there was duly filed in said court a stipulation for transcript, in words and figures as follows, to wit: [51]

In the District Court of the United States for the District of Oregon.

No. E.—8661.

SHOPE BRICK COMPANY, a Corporation,
Complainant,

vs.

ROY WARD and OTTO PETERSON, Individually, and ROY WARD and OTTO PETERSON, Copartners, Doing Business Under the Firm Name of WARD & PETERSON, Copartners,
Defendants.

STIPULATION RE TRANSCRIPT OF RECORD.

G. H. Marsh, Esq., Clerk of the Above-named Court:

It is hereby stipulated that the transcript of record shall contain the following and that the

praecipe heretofore filed may be disregarded and omitted.

In making up the transcript of appeal now pending in this cause to the United States Circuit Court of Appeals for the Ninth Circuit, please incorporate the following portions of the record:

1. The bill of complaint, omitting verification.
2. The amended answer, omitting verification.
3. Stipulation dated May 13, 1924, filed same date.
4. Copy of Shope Patent No. 985,709, Plaintiff's Exhibit 1.
5. Certified copy of the file-wrapper and contents of Shope Patent No. 985,709, Defendants' Exhibit "B."
6. The evidence taken in the trial court as set forth in the transcript of record in said court.
7. The opinion of the trial Court.
8. The interlocutory decree entered June 9, 1924.
9. The petition for, and order allowing appeal.
10. The bond on appeal.
11. The assignment of errors.
12. The citation on appeal.
13. Copies of drawings and specifications of patents numbered 518,239, 527,416, 531,842, 703,644, 958,194, 751,089 (constituting, respectively, Defendants' Exhibits "F," "G," "H," "L," "V," and "W"); and 624,563, constituting Defendants' Exhibit "A"; also the physical exhibits identified as Plaintiff's Exhibits 11–A, 11–B, 11–C, 11–D, and 11–E; also, Defendants' Ex-

hibits "X" and "Y"; also photographs, Plaintiff's Exhibits 3, 4, 5, 6, 7, 8, 9, and 10. [52]

And an order may be entered by the Court directing that all the original exhibits used on the trial of this cause be sent to the said Circuit Court of Appeals for its use.

Dated, June 14, 1924,

ROBERT V. RANKIN,
Attorney for Plaintiff.
JOSEPH L. ATKINS,
Of Attorneys for Defendants.

Filed June 16, 1924. G. H. Marsh, Clerk. [53]

AND AFTERWARDS, to wit, on the 17th day of June, 1924, there was duly filed in said court a statement of the evidence and exhibits therewith, in words and figures as follows, to wit: [54]

STATEMENT OF EVIDENCE.

Filed June 17, 1924. (Sgd.) G. H. Marsh, Clerk. [55]

In the District Court of the United States for the District of Oregon.

SHOPE BRICK COMPANY, a Corporation,
Complainant,

vs.

ROY WARD and OTTO PETERSON,
Defendants.

David F. Shope 1
Wm. G. Fiedler 42
Claude C. Clark 46
Thomas Bilyeu 49
Plaintiff rests 53 140
Angus Fleming 54
C. E. Starke 54
Roy Ward 75
Otto Peterson 84
Ralph K. Strong 91
Defense rests 104
Ernest E. Werner 106 140

[56]

In the District Court of the United States for the District of Oregon.

No. E.—8661.

SHOPE BRICK COMPANY, a Corporation,
Complainant,

vs.

ROY WARD and OTTO PETERSON, Individually and ROY WARD and OTTO PETERSON, Copartners, Doing Business Under the Firm Name and Style of WARD & PETERSON, Copartners,
Defendants.

BE IT REMEMBERED that this suit came on for trial before the Honorable Robert S. Bean, Judge of the above-entitled court on Tuesday, the 27th day of May, 1924, at the hour of 9:00 A. M.

of said day, complainant appeared by his attorney, Robert R. Rankin, and defendants appearing by their attorneys, Messrs. Atkins & Atkins.

Whereupon the following proceedings were had: [57]

TESTIMONY OF DAVID F. SHOPE, FOR PLAINTIFF.

DAVID F. SHOPE, called as a witness on behalf of the plaintiff, being first duly sworn, testified as follows.

Direct Examination.

(Questions by Mr. RANKIN.)

Your name is David F. Shope, and you reside at Portland, Oregon?

A. It is; I do.

Q. What is your occupation, Mr. Shope?

A. Brick manufacturer.

Mr. RANKIN.—I may say that at this time it has been stipulated between Mr. Atkins and myself that patents may be introduced without the originals, as we both have copies of the patents, and I offer the patent in suit.

Marked Plaintiff's Exhibit 1 and read.

Q. Mr. Shope, are you the inventor who is mentioned in that document or letters patent?

A. I am.

Q. Do you own that patent? A. I do not.

Q. Who is the owner?

A. The Shope Brick Company.

Q. Have you assigned it to them? A. I have.

Q. What is the Shope Brick Company?

(Testimony of David F. Shope.)

A. An Oregon corporation.

Mr. RANKIN.—Counsel does me the courtesy to stipulate that in order that we may not disfigure this book, the minute-book of the corporation, that the articles of incorporation of the Shope National Concrete Machinery were filed in Oregon on the 13th day of April, 1911, and that subsequently on the 9th of March, 1917, the name of the corporation was changed to the Shope Brick Company, and let the record so show. Counsel [58—1] stipulates that in the record we may file copies.

Q. The principal place of business of the Shope Brick Company is where?

A. East 8th and Division Streets, Portland, Oregon.

Q. How many years have you been engaged in the occupation that you mentioned, brick making?

A. In the brick making, between 30 and 40 years.

Q. How long have you followed the trade of cement brick making?

A. In its operation a great part of that time. Specializing in cement products about 20 years ago.

Q. Do you still keep up with the brick end of the business?

A. I do so by attending conventions, keeping all the magazines and literature bearing on the brick business constantly at hand.

Q. Have you an investigating sort of mind?

A. I believe it would so be considered.

Q. Are you a scientist? A. Scientist, no.

(Testimony of David F. Shope.)

Q. When did you begin your experimenting, Mr. Shope?

A. In this line, as I said, about 20 years ago.

Q. I couldn't quite hear.

A. About 20 years ago.

Q. What started you?

A. Being previously a manufacturer of clay products and carrying on general contracting, I conceived the idea as cement became available, that it was possible to make brick out of cement at points where clay was not available, and long distance shipments, so there was called in Chicago a concrete products convention some twenty years ago. I decided I would go down there and possibly pick me out a brick machine for the idea I had in mind, and observed that they were all semi-dry; that the product was [59—2] not meritorious.

Q. What sort of brick were upon the market when you began your investigation?

A. The line of what is known as semi-dry, common brick and blocks.

Q. At that time was there any attempt at waterproofing common brick that you had mentioned?

A. There had just begun possibly by chemists the integral waterproofing compound to overcome this objection.

Q. Was there any such product on the market?

A. I think there was at that time a very few in comparison with what there has been developed since.

Q. You said you knew the condition at that time

(Testimony of David F. Shope.)

of the market for common cement brick. What were their defects, if any?

A. They were not substantial structures, being porous and weak in comparison with what a good concrete product should be.

Q. Did you, in the process that you invented, overcome these defects? A. I did.

Q. How did you overcome them?

A. By incorporating more water in their fabrication.

Q. Any other?

A. And by perfecting a process of waterproofing the face as well as ornamenting the same.

Q. Did the trade take kindly to your proposition?

A. Not at first sight, except in limited cases.

Q. You had a great struggle? A. I did.

Q. Did this take much of your time?

A. When I once decided to make this worth while, I made it my serious and constant attention.

Q. What proportion of your life effort is represented in it? [60—3] A. Some 20 years.

Q. And have those 20 years been primarily devoted to that service, or have you had other collateral matters? A. Primarily to that service.

Q. Is your business, as it now exists, built upon this patent? A. Yes, it is, largely.

Q. What is the extent of your business?

A. The extent of my licensees since the issue of this patent, some four or five hundred thousand dollars.

Q. Are you doing business outside of this state?

(Testimony of David F. Shope.)

A. In some twenty odd states of the union, I have licensees.

Q. Is your service confined to the United States?

A. No, I have a number of plants in Canada, also patents there.

Q. What is the worth of your—you speak of licensees. What is your method of licensing them, briefly?

A. I conceived the passing on of the monopoly intended by the Patent Office to eliminate duplication of investment and ruinous competition. First we have to meet the trade with competition. We have got to do that with an equal or superior product at advantageous points, and my mode of installing plants is to prescribe the territory in which the brick is manufactured and sold, and in my duplicate license contract I agree at all times to defend the validity of my patents.

Q. As I understand you then, you license certain individuals in prescribed territory to use your patent rights? A. I do.

Q. Do you get reports from those localities in which plants are operating under your license?

A. Frequently and constantly.

Q. If you know, you can state to the Court, what is the product of these plants in the United States, the output of them? [61—4]

A. From two to three hundred thousand face brick per day.

Q. How long did this business operate without interference? A. Until the last three years.

(Testimony of David F. Shope.)

Q. In such opposition as has appeared, what have you done?

A. I have proceeded at all times with due caution to eliminate them. They have, until the last year, quit without contest. In the placing of a great many of these licenses, after getting the matter before them, they have asked for time, sometimes a month or two, to investigate my patents, after which contracts would be concluded. No one worth while in a material way has attempted to infringe the patent.

Q. Have you at the present time any cases pending?

A. One in Pennsylvania and one in Washington, in addition to this one.

Q. Have you had interference in Portland, Oregon?

A. Yes, some three or four years ago, perhaps five, a bricklayer by the name of Lescher had been applying my brick and using them in his work.

Q. That amounted to nothing, did it, Mr. Shope?

A. No. As soon as I brought the fact to his attention, he stopped.

Q. Recently have you had any interference?

A. The firm in question here, Ward & Peterson, some year or so ago.

Q. Have you licensed them? A. I have not.

Q. Have you allowed them to sell your brick, the thing manufactured, which is a product under your invention, have you authorized them to sell it?

A. I have not.

(Testimony of David F. Shope.)

Q. Have you authorized them to manufacture it, or to use it? A. I have not.

Q. When did you first become aware of their activity? [62—5]

A. Something like a year ago.

Q. What did you do?

A. I had contemplated after my city salesmen called it to my attention, to go out and talk it over with them. About that time I was attacked with a case of appendicitis, and was some two months in the hospital. As soon as I was able to get up, I remember I asked you to go with me, and our chauffeur drove us, my chauffeur drove us out to the plant.

Q. Where was that plant located?

A. At Sellwood, somewhere on 9th Street, I believe it is.

Q. Portland, Oregon?

A. Portland, Oregon. I went in there and explained the situation to Ward & Peterson while I was there. I believe one of the first leading remarks was that they had been doing this 20 years. I said that is very strange I have never seen or heard of them; have been trying to keep pretty well posted. I believe I offered to make them a present of five hundred or a thousand dollars if they would produce a brick made by them or anyone else 20 years ago. About that time I was ordered out of the plant very distinctly. He says, "If you want to start anything, start it." I says, "All right, we will do that at once." And left their plant.

(Testimony of David F. Shope.)

Q. State whether or not in their presence you instructed me to institute proceedings?

A. I did.

Q. The interview as a whole was not a pleasant one?

A. Not a pleasant one, no, unfortunately.

Q. Did you ever again visit their plant?

A. Not until one day last week.

Mr. RANKIN.—And that was, I might state to the Court at [63—6] this point by Messrs. Atkins & Atkins, attorneys for the defendants and myself under stipulation approved by the Court for the purpose of seeing the processes used there, and also to see the Shope plant, and see the processes used there.

Q. It was this occasion you mentioned when you visited there? A. Yes, it was.

Q. What did you observe, please?

A. I observed—I was going to take it up just a little further. On the first interview and inspection of their plant, I observed their stock pile. I seen quite a quantity of brick that would hardly be distinguished from the ones made at my plant. In the last visit they showed us the operation claiming to be the one they were using in producing a similar one to mine.

Mr. RANKIN.—At this point, it has been stipulated between counsel and myself that we have had certain pictures taken here and perhaps it will give a better idea than going into any detailed description.

(Testimony of David F. Shope.)

Q. Just state briefly what this is, and I will pass it over so the Court can see.

A. That is the building of the Ward & Peterson Company.

Offered in evidence and marked Plaintiff's Exhibit 2.

Q. And this.

A. This is a Shope brick machine operated in the Shope brick factory.

Offered in evidence and marked Plaintiff's Exhibit 3.

Q. This is one of your workmen? A. Yes.

Q. And what is this, please?

A. Another Shope brick machine, a different position [64—7] of the same thing.

Offered in evidence and marked Plaintiff's Exhibit 4.

Q. What is this, please?

A. This is one of the machines being operated by Ward & Peterson at their plant.

Offered in evidence and marked Plaintiff's Exhibit 5.

Q. This one, please.

A. This is another one of the machines operated at the Ward & Peterson plant, which they stated, I think, came from Montgomery Ward or Sears-Roebuck.

Offered in evidence and marked Plaintiff's Exhibit 6.

Q. This is a picture of Mr. Ward, the defendant?

A. Yes.

(Testimony of David F. Shope.)

Q. And this, please?

A. This is another view of the finished product from the last-named machine.

Q. Where located?

A. At Ward & Peterson's plant, Portland, Oregon.

Offered in evidence and marked Plaintiff's Exhibit 7.

Q. Did you see the brick manufactured upon this machine? A. I saw this brick manufactured.

Q. And entirely manufactured from sand into the product? A. As it then stood.

Q. And this, please.

A. This is another Shope brick machine being operated in the Shope brick plant at Portland, Oregon, different position of the work. [65—8]

Offered in evidence and marked Plaintiff's Exhibit 8.

Q. And this one, please.

A. This is another one of the Shope brick machines in the Shope brick factory.

Q. You will have to talk louder.

Q. This is another one of the Shope brick machines being operated in the Shope brick factory.

Offered in evidence and marked Plaintiff's Exhibit 9.

Q. I think this is largely a duplication, but as long as it is taken I think we will submit it.

A. I think this is the some workman and the same machine with the knives turned rearward to relieve the brick.

(Testimony of David F. Shope.)

Offered in evidence and marked Plaintiff's Exhibit 10.

Q. Now, Mr. Shope, with these exhibits that relate to your own plant, will you explain to the Court, please, what the operation is in general there, in the manufacture of brick?

Mr. ATKINS.—Will you frame your question so it can be dealt with separately.

A. Mention the exhibit as you describe it and the exhibit number has been marked on the back by the reporter. Just describe the method of your manufacture.

A. Referring to Exhibit No. 4, the cement, sand and gravel having went through the mixture placed by the operator at the machine has been shoveled into the machine, and with this tamp has tamped the brick sufficient. The next step is the operation of waterproofing the face by puddling the water, coloring matter and cement by agitation over the face of the product. [66—9] Exhibit No. 3 is exposition of the agitation of the surface of the product, one of the agitations. Exhibit 8, the agitation of the end of the brick has been carried on the same as the face, the guard plate being in position to be removed for completing the operation. Exhibit No. 10, this is another workman. The face having been completed, the workman draws the knives rearward, leaving the finished product. That shows the brick finally released. No. 9 is the workman showing the tamping or the compacting of the material ready for facing.

(Testimony of David F. Shope.)

Q. Now, were you present at the time these pictures were taken relating to defendants?

A. I was.

Q. Explain the two that you have there. Take the first exhibit, No. 5.

A. Referring to Exhibit 5, shows the brick manufactured by Ward & Peterson and released, left on the pallet the same as produced in our plant.

Q. Take Exhibit No. 6, what is that?

A. That is the machine that was used to make the header, the head on, or put the end on the brick; instead of guide plate as shown in previous exhibit, the Shope Brick Company, they hold a trowel in position, agitating and troweling the face on the end.

Q. Exhibit No. 7.

A. Is the finished product in attempted release; something got wrong with this machine, it would not go back, but that is where we left it.

Q. Was what you saw the defendants doing there substantially the same thing what you had described in your invention? A. It was. [67—10]

Cross-examination.

(Questions by Mr. ATKINS.)

You have testified, Mr. Shope, that you have been engaged in the brick-making business for 30 or 40 years? A. I did.

Q. Please explain a little more fully in what way you were engaged in that business.

A. Some thirty-odd years ago I was awarded the contract for building a bank building in my general

(Testimony of David F. Shope.)

contracting activities in Custer, South Dakota. Up to that time I had manufactured no brick, but there was a clay brick-yard there that had been operated, and the operator wanted to leave town, and made me a proposition to sell me this clay brick-yard. In order to secure the brick for this job, I decided to buy, and did buy this brick-yard. I operated it for some six or seven years, having the only clay brick-yard within a hundred miles of that place, shipping from there to Hot Springs, South Dakota, and other points. The last kiln of brick I burned in that yard had a million clay brick in it.

Q. You say that you bought that clay brick-yard thirty years ago, about?

A. Over. Thirty-seven or thirty-eight years ago, I guess.

Q. I didn't so understand. A. Yes.

Q. When did you begin to be interested in concrete work or cement work of any sort?

A. Some twenty years ago.

Q. Did you know anything about cement work, in a practical way before twenty years ago?

A. I did, such as putting in sidewalks, foundations, to a limited extent, and whatever was being done in cement in the art [68—11] at that time, I was Johnny on the spot.

Q. How far back does that acquaintance run, acquaintance with cement work?

A. When it became available, about twenty odd years ago.

Q. I want a statement of time?

(Testimony of David F. Shope.)

A. Twenty-odd years ago.

Q. Then your acquaintance with cement work, using that term in a general sense, began practically about twenty years ago?

A. I don't remember just the time, but when it was being introduced in the first stages in carrying on general contracting, naturally I was familiar with its operation and placement.

Q. Now, when you say that you were engaged in that work, you mean to say you were an artisan in the handling of cement?

A. I was a brick workman.

Q. You were with your own hands working with it? A. Many times.

Q. And prior to a period beginning about twenty years ago you had no practical experience in cement work?

A. I had all the practice the art developed in the last thirty-seven or eight years in the way of ordinary construction.

Q. You mean to say that you did that work more than twenty years ago?

A. I cannot recall to mind my first job, no.

Q. I understand that you have stated that your practical work in cement began about twenty years ago. A. Only specializing in it.

Q. You didn't so say. Now, will you please explain what you mean by cement work?

A. Sidewalks and the like.

Q. Do you know when you first laid a sidewalk?

A. I feel quite sure it was longer than twenty years ago. [69—12]

(Testimony of David F. Shope.)

Q. You swear that it was?

A. I think I am perfectly within the time limit.

Q. Do you swear positively that you did sidewalk work more than twenty years ago?

A. I would have to have my wife here to tell me where we was, and what was going on about that time. I usually refer to her.

Q. You testified that you began investigation in certain cement work about twenty years ago.

Q. What investigation do you refer to?

A. By going to Chicago to review convention of concrete products, called for that purpose at the Coliseum at Chicago.

Q. Do you know when that convention was held?

A. Roughly, some twenty years ago.

Q. At that time, what was the state of the development of the art of making objects of cement composition, if you remember in a general way?

A. They were along the semi-dry line, exclusively.

Q. Did you see at that time any specimens of what is called cast stone?

A. I think I did; quite sure.

Q. What is the difference between semi-dry brick, we will say, and cast stone?

A. One can be removed from the machine at once, making it a commercial proposition on a large scale, while the other must remain in the machine until it is set hard enough to remove.

Q. Your answer is not responsive. What I want to know is what is the difference in the two materials in manufacturing.

(Testimony of David F. Shope.)

A. One is a much better product than the other.

Q. What is the difference, structurally, or considered according to the process of manufacture?

A. The cast stone is more dense and more crushing and tensile [70—13] strength.

Q. The cast stone is a better article, then, you would say, than the semi-dry brick? A. Yes.

Q. How is cast stone made?

A. By pouring it in liquid form into a mold, that is not liquid, but so it will run and nicely take the impression of the face of the plate that might be for its reproduction. Sometimes they are wooden molds, sometimes plaster molds, sometimes they are undercut, where it can't be pulled directly away in the glue mold.

Q. When you say liquid cement, what do you mean?

A. I mean cement, water and aggregate, mixed to the consistency of flowing.

Q. You can use cement and water without any aggregate other than the cement affords?

A. Neat cement without any aggregate.

Q. Were you familiar at that time, twenty years ago, with what is known as the Stevens cast stone?

A. I was not at that time familiar with any of them when I first began my investigations.

Q. Did you see the Stevens cast stone exhibit at that convention?

A. I do not call in mind whether I did or not.

Mr. ATKINS.—I offer a copy of the patent in evidence to save time.

(Testimony of David F. Shope.)

Mr. RANKIN.—This is going into the patent. We have an expert for that, and is going to take up a lot of time in this examination. I believe the question was improperly put to this witness, because in the direct examination he is not qualified on patents. We will take a great deal of time on that subject. [71—14]

COURT.—He is asking whether he knew the patent at that time.

Mr. ATKINS.—I am not going into the patent, but I want to find out what he knew about the art upon which his invention to be patentable must have been predicated.

A. I don't remember having seen it at all.

Mr. ATKINS.—I offer in evidence the patent first submitted to the witness, No. 624,563, issued May 9, 1899, to C. W. Stevens.

Marked Defendants' Exhibit "A."

Q. Referring again to this Defendants' Exhibit "A," which I hand you, please state when you first became acquainted with the existence of that patent? A. I do not call it in mind at all.

Q. Have you ever seen it before?

A. I have never seen that patent before, no.

Q. You knew that it was set up in the answer, didn't you, in this case?

A. I will have to refer that to my attorney, whether that particular patent has been set up.

A. Well, as far as you know.

Mr. RANKIN.—That is certainly improper, if the Court please. The pleadings certainly speak for themselves.

(Testimony of David F. Shope.)

Mr. ATKINS.—I am asking whether he knew, not whether in there.

Mr. RANKIN.—It is immaterial.

COURT.—If you don't know, say so.

A. No, I do not.

Q. There is no denial upon your part, I believe, that semi-dry bricks or blocks had been made more than twenty years ago. A. No. [72—15]

Q. Explain to the Court what you mean by semi-dry bricks or blocks?

A. Where the brick or block was molded so semi-dry that you could take it up by hand and press it in your hand and it didn't stick to it for the reason that at that time the brick and block was molded against steel-faced plates there in position. Then the mold was dry, drove the water from the pipe; would leave the product stand on the pallet, the form of the green block. Now, if we would attempt to make a sidewalk to-day the way they made blocks, they would be utter failures, for the reason the lack of moisture didn't make a perfectly homogenic aggregate and bind it thoroughly together. If you were going to build a building here, the inspector would not let us build a semi-dry foundation. It would have to be wet; block and brick at that time were all along the line of semi-dry, against a face plate or plunger; sometimes a plunger might go down. It is all in the line of semi-dry products.

Q. The body of brick which you make to-day is semi-dry brick, which was old twenty years ago?

(Testimony of David F. Shope.)

A. No, sir, my object in developing this machine and process was to have a mixture which excluded the sliding movement.

Q. Are we to go into the question of machines?

A. You asked me about it.

COURT.—Not talking about that. The patent does not cover that. It is a patent for a process for making brick waterproof.

A. Ask the question again, please.

Question read.

COURT.—So specified in the patent.

A. The common brick is, yes. Now, let me qualify that.

COURT.—Counsel asked you if the brick you used to-day [73—16] was the semi-dry class.

A. It would be in that class, yes.

Q. What constituent elements are used in the manufacture of semi-dry bricks?

A. Sand, aggregate and cement—I mean cement, aggregate and water.

Q. By aggregate in that definition, what do you mean?

A. It might be sand, gravel, crushed stone, crushed slag, marble dust, or the like.

Q. What aggregate, using it in that sense, do you use in your manufacture to-day?

A. What is known as concrete sand mixed with the proper proportions of mason's sand to properly fill in the voids.

Q. Any sort of sand would answer the purpose.

A. No, sir, clean, washed sand would answer the purpose.

(Testimony of David F. Shope.)

Q. But you can make a brick of any sort of sand as an aggregate. A. No, sir.

Q. You couldn't?

A. Not make it merchantable. Could make one, yes.

Q. That is what I want to know, could make a brick, but to have a good brick you always use a certain kind of sand? A. Always.

Q. Mix that with a certain proportion of cement?

A. And water.

Q. But you use a certain proportion of cement?

A. I do.

Q. Is that proportion fixed or variable?

A. It is fixed by city ordinance here, and most other cities throughout the United States.

Q. I am speaking now generally of the manufacture of bricks. You can use different proportions of sand and cement, can't you?

A. You must comply with the city ordinances.

COURT.—Leave the city ordinance out. [74—17]

Q. We are talking about brick now, not about city ordinances.

A. I just wanted to know if talking about merchantable.

Q. I am talking about brick.

A. Read the question, please.

Question and answer read as follows: (Is that proportion fixed or variable?

A. It is fixed by city ordinance here and most other cities throughout the United States.)

(Testimony of David F. Shope.)

Q. What do you mean by fixed? A. City code.

COURT.—Never mind about the city code.

Q. Leave out the city code.

COURT.—Leave the city code out. We are not concerned about that. In making brick, do you have to use the same amount of sand always?

A. No, you do not have to.

Q. That is all I want to know. To what extent may the proportion of sand and cement be varied in practice?

A. In practice no two manufacturers manufacture alike. Ordinary good aggregate would be one, two and a half, three, or one, three, three—one, three, five depending on the specifications to be met.

Q. What is the least amount of cement in proportion to the aggregate that you can use to make a brick that will hold together?

A. Possibly one to fifteen.

Q. What proportion do you use in your own manufacture? A. One, three, three.

Q. What does that mean—one, three, three?

A. One part cement, three parts fine sand, and three parts coarse sand and fine gravel.

COURT.—That makes it one to six.

A. Yes, sir. [75—18]

Mr. ATKINS.—I think, your Honor, that the witness is referring to volume.

COURT.—He said one part cement to six parts aggregate.

Mr. ATKINS.—No, one part cement and three parts aggregate, as I understand. The aggregate is composed of equal parts—

(Testimony of David F. Shope.)

A. No, six parts of total aggregate.

Q. I wasn't sure about that. Now, to that mixture of cement and aggregate do you add anything else? A. Not in making common brick.

COURT.—You add water.

A. I said water, cement and aggregate in the first question.

Q. But you use water? A. Yes, sir.

Q. How much water do you use in your manufacture?

A. About two ordinary buckets of water to a bag of cement, and six cubic feet of aggregate.

Q. You depend upon the presence of the water and cement to hold your aggregate together and make your brick, don't you? A. Yes, sir.

Q. That dry brick is not then actually dry.

A. No, the dry name would designate it as semi-dry as against cast stone or flowing mixture.

Q. The invention alleged to be found in the patent in suit—I believe there is only one—was made by you when?

A. The same year of the—about 1908 or '09, I believe some year before applying for a patent.

Q. It was not before 1908, then?

A. I might have been experimenting along those lines, yes.

Q. I am talking about inventions. When had you made this invention?

A. Well, I would have to review the patent there. My application [76—19] was 1909. That was when I started to protect the invention, but at least a year or more before that I was dabbling in this proposition.

(Testimony of David F. Shope.)

Q. But you don't know how long before the date of the application you made the invention.

A. A year or better, I should say; over a year.

Q. Well, you have no accurate knowledge, then, of the date? A. No, I didn't set it down.

Q. Now, you say that when you began your investigation of this line, there was waterproof brick on the market? A. No, sir.

Q. I think that is the statement you made on direct examination. A. I did not.

Q. I think that is correct, but rather than take time to examine it—

A. There was some reference to waterproofing compound, not waterproof brick.

Q. Explain then a little more fully what you do mean by waterproof.

A. The only attempt to waterproof brick, if it was in vogue at that time, was to add a chemical that would prevent the moisture from penetrating the semi-dry product.

Q. Then, as far as you knew, when you began, the use of a coating a neat cement mixture was not recognized as a waterproof covering or coat?

A. No, sir.

Q. If there was, you didn't know anything about it? A. No.

Q. You have testified that your invention is conceived by you to have consisted in incorporating more water in semi-dry brick, is that right? [77—20] A. On the face.

Q. Please explain just what you mean by that, so the Court will understand it.

(Testimony of David F. Shope.)

A. By puddling the face of the semi-dry product with additional water, or trowelling.

COURT.—Trowelling into the surface.

A. Trowelling, floating, stippling, whatever the addition might be.

Q. The covering of a surface made of porous material, or specifically of cement mixture with a trowelled coating was not new at that time, was it?

A. I never had heard or seen of it, or any green product faced in like manner, or I would not have sworn to be the true and original inventor of my patent.

Q. Then you conceived at that time that you were the first one to trowel a coating upon cement base.

A. Upon a cement brick or block.

Q. You draw a distinction between a cement brick and a sidewalk, for instance?

A. I certainly would.

Q. In what respect? In what particular?

A. In the respect that we use a sidewalk to walk on and brick to build buildings out of.

Q. You never heard of a pavement built of bricks? A. Yes.

Q. Then you would walk on brick in that case?

A. Yes, that is the first brick sidewalks were walked on mostly.

Q. Then that distinction hardly obtains, does it, between the two manufactures?

A. I may be a little bit thick there to know just what your [78—21] intention is, Mr. Atkins.

COURT.—You said your distinction between a sidewalk and brick was one was to walk on and the other was for some other purpose, and then counsel

(Testimony of David F. Shope.)

asked you if sidewalks were not made of bricks and you said yes, and then he asked you if your distinction held good.

A. My distinction in the product of trowelling the brick does hold good.

Q. But you have no patent on the product, I believe. A. Not on the product.

Q. It is altogether on the process?

A. It is altogether on the process.

Mr. ATKINS.—I want to offer in evidence certified copy of file-wrapper and contents of Patent 985,709, which is the patent sued upon.

Mr. RANKIN.—I think that belongs in your case in chief, but we have no objection.

Mr. ATKINS.—It would have been offered that way, but I don't know as it makes any difference particularly as I wish to ask the witness a question in regard to it.

Marked Defendants' Exhibit "B."

Q. Referring to the amendment dated April 8, 1910, as set forth in Exhibit "B" just offered, you will find a substitute Claim 1 in the following language: "1. The herein-described method of forming a waterproof faced cement block which consists in first mixing cement and sand in a semi-dry state and molding it into a block, next covering the face of the block with water and then sifting dry sand thereon, whereby the water will carry the added cement into the pores of the block without the application of external pressure." I further call attention to the fact [79—22] that in the official action on that claim, dated April 19, 1910, the following language is used: "Claim 1 covers nothing beyond

(Testimony of David F. Shope.)

the ordinary process of laying cement sidewalks, when the surface of the pavement is coated in whole or in part with water brought to the surface by tamping. It is accordingly rejected on Haddock." I now ask you to state whether or not you accepted, through your attorneys that rejection, and abandoned that claim? There is the record of it.

A. I remember my attorney handing me several patents pertaining—or cited as an infringement against my application. I asked him to review them and then requested that he go with me, and observe the making of the brick and see if he there saw any similarity at all. After doing so he agreed that there was not and proceeded with more direct information to the prosecution of my patent.

Q. How do you reconcile that statement which you have just made with the fact that the statement of the Examiner was accepted to be correct and that claim was erased upon the rejection predicated upon the statement?

A. I lay it to my attorney not being familiar with the actual operation when writing that claim or making that.

Q. But he was familiar with it when he erased that claim?

A. In other words, he got the wording conforming to the way I was doing instead of his conception of my telling him.

Q. You are acquainted with Claim 1 of the patent in suit? A. Yes.

Q. I will ask you to compare that Claim 1 with Claim 1 which was erased as set forth in the last preceding question and to state wherein the inven-

(Testimony of David F. Shope.)

tion as defined in the two claims, if it exists, is to be found?

Mr. RANKIN.—I want to object to that, your Honor. This [80—23] man says he doesn't qualify as a scientist. He is a practical brick man.

COURT.—He doesn't pretend to be an expert in patents. I suppose anyone can read the two claims and see where they conform.

Mr. ATKINS.—If your Honor please, this is the man who made the invention, and what I want to get at is a statement from him where he shows any distinction between the one and the other. He certainly must have considered that there was some difference there, and it seems to me the Court would be aided in considering that point. I can't see any difference for my part.

Mr. RANKIN.—As long as he inquires what he was doing, I don't object, but I do object to asking him to interpret someone else's language. I think that is entirely outside the province of the witness.

COURT.—Interpreting his own language now.

Mr. ATKINS.—This is over his signature.

COURT.—He signed it anyway. He can state if he recognizes any difference between the two claims.

Mr. RANKIN.—Save an exception.

A. It seems the only change is in possibly the construction of the amount of water in it.

Q. That is the only difference you see?

A. That is the first step in the operation.

Q. Do you see any other difference?

A. Without rereading it and taking a lot of time here, no, sir. That explicitly I will say, no.

Q. Is there any difference between the process

(Testimony of David F. Shope.)

defined by that claim 1, which was rejected and erased from the record by you, and Claim 1 which appears in the patent? I am asking [81—24] you about the invention now, not about the language of the claim. Is there any difference?

A. There was no difference in my actual operation, but I don't call to mind just how this specification was arrived at.

Q. The erasure of that Claim 1 met with your approval, didn't it, at the time—that Claim 1 which was erased, I mean.

A. That is what I hired a lawyer for. I was trying to convey to him my actual operation at all times.

Q. In your direct examination you stated that your invention was conceived by you to consist in incorporating more water in the brick?

A. The face of the brick particularly.

Q. In the face of the brick, that is to say, getting more water into the body of the brick by the application of water to the face?

A. Enough to make a perfect bond between the face and the body.

Q. You also in that same patent referred to ornamentation as part of your invention. The ornamentation does not enter into the patent, does it?

A. The specification reads, "or otherwise treat, as may be desired." That is considered ornamentation.

Q. That is a matter of construction by the Court. I will pass that by. When you seek to incorporate more water into the brick by application of water to the face of the brick, does it make any difference

(Testimony of David F. Shope.)

in fact whether you add the water separately and afterward apply the cement or not?

A. The agitation is perfected in either case. The agitation in either case perfects—

Q. But your first claim calls for no agitation. I am asking a simple question whether it makes any difference where you put your water on with respect to the addition of the cement?

A. Not materially. [82—25]

Q. Makes no difference. You can get the same result by the sprinkling of water and cement together on the face of the brick as by putting first water on the brick and then adding cement?

A. Yes.

Q. And as a matter of fact in your manufacture, you do sprinkle the water and cement simultaneously upon the face of the brick, don't you?

A. That depends upon the dexterity of the operator. No two of them do exactly alike.

Q. And it doesn't make any difference what they do? A. No.

Q. You have in your cross-examination used the term "puddling." Please explain to the Court what you mean by puddling?

A. Where was the term used?

Q. You used it just now in cross-examination.

COURT.—What do you mean by puddling?

A. Agitating the mixture.

COURT.—Agitating what?

A. The cement, coloring matter and water, marble dust, whatever you may apply.

COURT.—On the surface of the brick, the face of the brick? A. Yes.

(Testimony of David F. Shope.)

Q. And you regard that puddling operation as the same as adding water and afterwards cement to the face of your brick?

A. The completion of the operation.

Q. But the first claim calls for the application in order of water and then the cement? A. Yes.

Q. Now, you claim that you regard puddling as the same thing as that?

COURT.—Puddling, I understand, is the agitation of the water [83—26] and cement after it is applied? A. Yes.

Mr. ATKINS.—There may be some question as to whether puddling means the mixing of cement and water to the consistency of ordinary mud, or whether puddling means agitation or the mixing of them together in the application. It may be a matter of some importance because of the prior art, as we shall afterwards show your Honor, shows that the application of a mixed body of water and cement. I am giving him an opportunity to draw the distinction, if there is a distinction.

A. Between puddling and agitation?

Q. Well, you said puddling is a mixing of it?

A. Yes.

Q. Do you know what the term slurry means, which is used in these patents?

A. A cementitious material of water and cement that is soft enough to flow or screen easily.

Q. Now, that slurry you regard as the same—the application of that slurry you regard as the same as the process you describe in your patent? A. I do.

Q. You think your patent covers the application of slurry to cement brick.

(Testimony of David F. Shope.)

Mr. RANKIN.—If the Court please, I have an objection, and I presume my objection is running to all this evidence, because this witness said upon direct examination he is not a scientist, and this goes into the question of the prior art here, which the witness has specifically said he has no knowledge of.

COURT.—This is whether he regards the two processes the same; not the prior art. [84—27]

A. I do.

Q. You have also used the term "stipple." Please define to the Court what you mean by stipple.

A. By taking a stipple brush or whisk broom and by impinging blows roughen the texture to the desired result.

Q. That is to say, you strike a plastic surface with a brush directed along the longitudinal line of the bristles of the brush, and you get a stippled effect?

A. Yes.

Q. That you knew to be old in the art before you entered the field of invention? A. Yes.

Q. You have testified that the extent of your business is five hundred thousand dollars, as I understand it.

A. The amount of the licenses total price, but that includes machinery, installation and overhead, and a thousand things that make it up.

Q. Does that mean income or paper?

A. No, that means total cost of the installation.

Q. And it may be represented in large part by paper which you have taken for licenses?

A. It is represented by the machinery and equipment to produce certain capacity per thousand

(Testimony of David F. Shope.)

bricks per day. Sometimes I sell machinery. Sometimes I go and equip the whole plant.

Q. You mean to say you have sold five hundred thousand dollars' worth of machinery?

A. Machinery and equipment and patent protection.

Q. In respect to patent protection, have you received cash entirely? A. No, sir. [85—28]

Q. Or part cash and part promises to pay?

A. Like other business, sometimes cash and sometimes partial payments in the way of notes or contracts.

Q. Do you mean to say that you have received in your business five hundred thousand dollars in cash?

A. I wouldn't say five hundred thousand dollars in cash—between four and five hundred thousand dollars, something like that.

Q. In cash?

A. I think so. Four hundred thousand, possibly.

Q. How is that?

A. Possibly four hundred thousand. A lot of these payments are still pending.

Q. Then by cash you mean promises to pay. You regard a promise to pay as cash?

A. No, I do not.

Q. Then you have actually received in cash say four hundred thousand dollars?

A. Something like that, yes.

Q. How much more in paper?

A. Part of that four hundred thousand might have been paper at the time, but was eventually cash.

Q. Besides the cash and paper which has been

(Testimony of David F. Shope.)

converted into cash, how much promises to pay in addition to that, has your business brought you?

A. Just ordinary steps from installation covering a term of one, two or three years, making the payments sometimes—

Mr. ATKINS.—I don't think that is material, your Honor.

COURT.—I don't see what it has to do with the validity of this patent. [86—29]

Q. You have a general form of license which you issue to those who purchase licenses under your patent?

A. I hardly think I could get that amount of money away from customers unless I did. I do.

Q. Then you say you have a form of license?

A. I have, yes.

Q. You have testified in regard to that without any objection upon my part, because I assumed you had a form of license. A. Absolutely, yes.

Q. Can you produce such a form? A. Yes.

Q. Will you do so?

A. I will, if my counsel says I shall.

Mr. RANKIN.—Have you one here?

A. Yes. I want to qualify that condition, with the consent of the Judge. (Produces.) Have you two there?

Q. Yes, two there.

A. Well, you can have them both. They are always taken in duplicate, one for me and one for the licensee.

Mr. ATKINS.—May I have one copy of that?

Mr. RANKIN.—I have no objection to offering in evidence.

(Testimony of David F. Shope.)

Mr. ATKINS.—I am going to offer in evidence copy of license presented by the witness.

Received without objection and marked Defendants' Exhibit "C."

Q. You have stated that the output of your business, considered as a whole is two to three hundred thousand face brick per day? A. Yes.

Q. That covers all of the output throughout the United States? A. Probably so.

Q. That is an estimate, at least? A. Sure.

Q. Intended to cover the output for the United States? [87—30]

A. Sure. Different grades of brick have larger production, so it must vary in the kind of brick, owing to the fact that we have some seventy-five or eighty different styles.

Q. You have testified that suits which you have brought against alleged infringers heretofore have been settled. A. Yes.

Q. With the exception, I believe, of a suit in Pennsylvania and one in Washington.

A. Washington, yes.

Q. All these infringers were small infringers, as you call them? A. Yes, sir.

Q. That is to say, they didn't have the means to fight a suit?

A. Nor the capital to carry on successfully a business.

Q. You have referred to a suit in Oregon three or four years ago. What suit was that?

A. Not a suit; that was an infringement without any action.

Q. And there was no suit filed? A. No, sir.

(Testimony of David F. Shope.)

Q. And they simply ceased to do business on your threat of suit, or your objection. Was it a threat of suit?

A. I think the incident was this, that I filed a lien on the building where he made brick, face brick, and in order to let him settle up—he said if I would take the lien off, he would be good. I said all right, I would just do that.

Q. What ground for filing a lien had you?

A. Royalties on the use of my product.

Q. Had he signed a contract?

A. He was furnishing brick and laying them on this job.

Q. You have testified that you visited the plant of Ward & Peterson? A. I did. [88—31]

Q. Last year, was it not? A. Yes.

Q. That was the first and only time until you afterwards visited it a few days ago by arrangement with counsel? A. Yes, sir.

Q. How were they manufacturing brick at that time?

A. In the usual way as to the body of the product by mixing sand—

Q. That is semi-dry brick they made in the usual way?

A. And then applying the cementaceous face.

Q. Be a little more explicit, if you please, in the record, in regard to applying cementaceous face. How did they put that on? A. By agitation.

Q. Did they put water on the brick? A. Yes.

Q. By itself? A. After agitation.

Q. I am asking you whether they put just water

(Testimony of David F. Shope.)

upon the face of the brick after they agitated the cement?

A. Not pure water, but in combination with cement.

Q. But they didn't add water by itself?

A. Just before they got through with the operation they did, several times.

Q. Having a brick, what is called a semi-dry brick, did they put any water by itself right on the brick?

A. Not by itself until after the agitation was partly completed.

Q. As a matter of fact, didn't they make a mortar on the side and simply place that on the face of the brick? A. By agitation they did.

Q. That is all they did?

A. No, not all they did; they applied more water. [89—32]

Q. More water to the brick after they had put this slurry on, because that is what we are referring to. A. Yes, repeatedly.

Q. Put more water on it? A. Yes.

Q. Did the putting of slurry appear to you to be an infringement of your process? A. It did.

Q. The application of water after the slurry was on was also an infringement? A. Yes.

Q. Then your postition is your invention covered the application of water and cement in any way by agitation to the face of semi-dry brick?

A. In combination with agitation, I do.

(Testimony of David F. Shope.)

Q. How was this agitation affected?

A. By trowel and stripple broom.

Q. What sort of a trowel did they use?

A. Ordinary mason's trowel.

Q. There are several kinds of mason's trowels, I believe.

A. For plaster and brick laying and painting trowel to be explicit.

Q. It was a metal trowel?

A. Metal plaster trowel.

Q. And you used in your manufacture a wooden trowel? A. All manner of trowels, floats.

Q. Is not the metal trowel a spreading trowel, as distinguished from a float, which stirs up the surface? A. Yes.

Q. And they were using a metal trowel?

A. They were using a metal trowel.

Q. Was there any use made by defendants, as far as you know, of [90—33] anything but a metal trowel that you know of?

A. Not that I know of.

Q. Have you any information other than that which you gained upon this occasion of your first visit to their place?

A. I have. My city salesman went into their plant one time to observe what they were doing. He saw half a dozen more or less of my brick laying on the shelf in sight of where they were working, as if they were seeing whether they could duplicate everything we were doing.

(Testimony of David F. Shope.)

Q. You didn't see—you have no personal knowledge of what your city salesman saw, of course?

A. I think I have his affidavit to that effect?

Q. But you have no personal knowledge?

A. No personal.

Q. Beyond that one visit that you made?

A. Absolutely none whatever.

Q. Did any report ever come to you that they were making their brick otherwise than as you saw them make it?

A. The report came constantly that they were making Shope brick, selling them at a lower price.

(Question read.)

A. The constant report was that they were very similar or exactly like ours.

COURT.—That isn't answering the question.

(Question read.)

A. I never got any report of how they were making of any kind.

COURT.—Then you never got any report on the making of them?

A. No, not any. I want to be explicit.

Q. Then as far as you know they made the one way, and that is as you saw them make it. [91—34]

A. I know nothing prior to the observation the other day. The way they made them then, as I have explained.

Q. You say you were ordered out of the plant?

A. Yes, very urgent request.

Q. What would be the occasion of their ordering you out of the plant?

(Testimony of David F. Shope.)

A. None whatever. That was the surprising part.

Q. Didn't you use insulting language?

A. I did not to start with at all.

Q. To start with?

A. No, sir, we were talking about the whole thing was when Mr. Ward, I believe it was, said he made the brick 20 years ago. I offered him five hundred dollars to get me one. He said, "You get out." Right there the gun was off.

Q. So it was just because you wanted to see a brick you were ordered out. Is that your statement? A. No, I went there to talk it over.

Q. I know but you were ordered out because you asked to see a brick, and offered that money.

A. No, no, they took me over it very nicely, and showed me their brick on the stock pile, but when it came to that point, as I have explained, I was ordered out.

Q. And you state positively that you used no insulting language before that?

A. Before it was over, I might have.

Q. And possibly you used it before you were ordered out?

A. Positively not before I was ordered out. It came just like a clap out of the sky. No occasion for it. We just went in there to talk it over. A surprise to me to be ordered out at that stage of the conversation. I was just out of the hospital, and I didn't arbitrate about going.

Recess until 2 o'clock. [92—35]

(Testimony of David F. Shope.)

Tuesday, May 27, 1924, 2 P. M.

DAVID F. SHOPE resumes the stand.

Cross-examination (Continued).

(Questions by Mr. ATKINS.)

Q. You have stated in your testimony that in carrying out your process or method, you agitated the cement and water upon the face of the brick. Is that correct? A. Yes.

Q. Suppose you applied the water to the face of the brick and then spread the cement or sprinkled the cement on the water, what would be the effect of that agitation?

A. Why, it would leave the surface of a kind without any material ornaments, but would be more waterproof than ordinary common brick would be.

Q. And you hold that by such treatment you would get any penetration of the brick by the cement and water added to it without the agitation?

A. Yes.

Q. You would? A. Yes.

Q. Then agitation is not necessary to your process?

A. It adds perhaps to the bonding and penetration both.

Q. In your patent you refer to pores and interstices as being penetrated by the added mixture of cement and water. What do you mean by pores and interstices there? A. Voids.

Q. Do you mean all voids that might be present?

A. Well, without a magnifying glass, I couldn't answer that question.

(Testimony of David F. Shope.)

Q. Suppose the operation were raked up, would those be pores or interstices as you designate them by that term in your patent?

A. Simply raked up? [93—36]

Q. Yes.

A. It wouldn't change the void quantity materially, laying flat or raked up a little possibly.

Q. You know, as a matter of fact, that when you tamp a semi-dry brick into this mold that brick is porous? A. Yes.

Q. Now, are those the pores that you refer to when you say that the cement applied to the face of that will penetrate them? A. Yes.

Q. And you say that there is no distinction between them and any voids that may be present by reason of the roughness of the surface of the brick?

A. Raked up, there might be more voids.

Q. Would those be pores, that is what I want to know, in your contemplation of the patent?

A. Just the same condition except misplaced, whether it was up or down; I suppose might not be quite so dense when raked up as when tamped in, might be a little more in that part that was raked up.

Q. Suppose that in facing of the brick as you make it you coat them with a layer of small pebbles. Would the spaces between those small spaces be what you mean by pores? A. No.

Q. They would not be pores? A. Disconnected.

Q. They would be voids, nevertheless, would they not?

(Testimony of David F. Shope.)

A. Well, I think it would be more open space.

Q. What is an open space but a void?

A. Well, all right, void it is.

Q. Then you do draw a distinction between pores and mere voids. Do you wish to be understood as saying that? [94—37]

A. I don't see any material difference between the two.

Q. Then you still insist, would you, that pebbles applied to the face of a concrete structure or mass in its plastic condition would constitute pores?

A. No.

Q. The difficulty is to get you to define what you mean by pores or interstices. Now, you say they are voids but you draw a distinction between some voids and other voids. Now, what do you mean by pores or interstices with this explanation?

A. I am not an analytical chemist, and perhaps I am not able to answer your phraseology in the terms which you intend.

Q. Then you had no particular reason for the words pores or interstices in your patent?

A. I hired a patent attorney to help me impart my intent.

Q. And your intent was to pour that cement or a mixture of cement and water on to the brick, and it would enter where it could in there, and would be excluded perhaps where it couldn't enter?

A. That is the idea. Capillarity had something to do with it.

Q. So it resolves itself into this; That you

(Testimony of David F. Shope.)

regard the term pores or interstices as fully equivalent of the term void, do you?

A. I couldn't tell you the technical difference.

Q. When you apply your coating of mixture to the face of a green stone and agitate it, will you take up any portion of sand that is present in the brick by that agitation?

A. Possibly some very slight particles.

Q. Do you know, as a matter of fact, whether you do or do not take some of the sand up by agitation, as you call it, which you apply to the coating mixture? A. I would say so, yes.

Q. Besides that your coating mixture is not necessarily neat [95—38] cement, as I understand it. I think you so specified. A. Yes.

Q. It may be a mixture in itself that includes some sand? A. Or coloring matter.

Q. Well, it might include sand, I think you also said? A. Yes, or marble dust.

Q. A small mixture of aggregate, but a rich admixture of cement? A. Yes.

Q. Now, you say that you agitate this coating mixture—how do you agitate it in your manufacture of your brick?

A. With various instruments, known to the trade as floats, trowels, brushes, wire combs.

Q. When you use a float, which, as I understand it—you will correct me if I am mistaken—is a wooden trowel, you apply considerable pressure to the trowel or float against the coating mixture, don't you? A. Yes.

(Testimony of David F. Shope.)

Q. And it is by reason of that movement of the trowel over the surface under pressure that you get the desired result? A. Yes.

Q. Then in your patent when you say that you accomplish this without pressure, is that a correct statement or not?

A. As to some prior operation where pressure was applied to force it in instead of agitation—that is what I meant.

Q. Then you didn't intend to exclude all pressure but some of the pressure. A. Some pressure.

Q. I hand you Plaintiff's Exhibits 3 and 4, 9 and 10, and will ask you to state what Exhibit 3 illustrates.

A. A Shope Brick Machine describing the agitation of a float.

Mr. RANKIN.—We cannot hear you. [96—39]

A. Showing a brick machine with the action of the float or agitating.

Q. In Exhibit 3, the picture shows the machine filled with the semi-dry mixture after it is tamped, and after the coating mixture is applied, does it?

A. Yes.

Q. Plaintiff's Exhibit 4 shows the method of applying the coating mixture? A. Yes.

Q. Exhibit 9 shows, does it not, the tamping operation? A. It does.

Q. That operation is for the purpose of packing the mass of semi-dry mixture in the machine, is it not, in the mold of the machine, is it not?

A. Yes.

(Testimony of David F. Shope.)

Q. Plaintiff's Exhibit 10 shows, if I understand it correctly, the molded semi-dry brick before the application of the coating, is that right?

A. No, the finished brick is being released from the machine.

Q. After the coating? A. Yes.

Q. And until the coating is applied the brick remains in the mold? A. They do.

Q. The float is applied on top over the top of the mold partitions? A. Yes.

Q. And in order to reach the end of the brick you drop down the gate which exposes in some manner or in like manner the end of the bricks as the tops are exposed? A. Yes.

Q. And they are treated in the same way, substantially? A. Yes.

Q. In your testimony you have referred to two kinds of machines [97—39] which you saw in defendants' plants? A. Yes.

Q. You saw only two types there?

A. Only two.

Q. Please explain what machine that is which is shown in Plaintiff's Exhibit 7?

A. It was known as the six-brick machine, making six bricks at a time.

Q. How is the tamping done in that machine, do you know?

A. It would have to be done by hand.

Q. In Plaintiff's Exhibit 6, what is shown?

A. The manner of facing the brick on the end.

Q. What type of machine is shown in this exhibit?

(Testimony of David F. Shope.)

A. The same as mentioned in the previous question.

Q. The same as shown in Exhibit 7? A. Yes.

Q. Now, the other machine and the second of the only two you saw is shown in Plaintiff's Exhibit 5, isn't it?

Mr. RANKIN.—I want to object. It goes only to the question of machines, and is no part of the process; it is only taking up time.

Mr. ATKINS.—The witness has testified to seeing these machines and relying upon them.

COURT.—The plaintiff has offered photographs. I don't know what bearing it has on the case.

Mr. ATKINS.—Not at all, but it is offered as evidence of infringement, and we want to make it perfectly clear to the Court, as it will be when your Honor reads it.

A. Shall I answer the question?

COURT.—Yes.

A. Yes. [98—40]

Q. The brick shown in Exhibit 5 are ready for treatment after the manner illustrated in Plaintiff's Exhibit 6, are they not?

A. No, they are finished.

Q. Those are finished brick?

A. Those are finished brick.

Q. In Exhibit 5? A. They are.

Q. You mean after the application of the coating?

A. Yes.

Q. Of the float? A. Yes.

Witness excused. [99—41]

TESTIMONY OF WILLIAM G. FIELDER, FOR PLAINTIFF.

WILLIAM G. FIELDER, a witness on behalf of the plaintiff, being first duly sworn, testified as follows:

Direct Examination.

(Questions by Mr. R. R. RANKIN.)

You are a resident of Portland, Oregon?

A. Yes.

Q. Where are you employed?

A. Shope Brick plant.

Q. How long have you been employed there?

A. Four years and a half.

Q. Do you know Mr. Ward and Mr. Peterson?

A. Yes, that is, by sight.

Q. When did you first see them?

A. About a year and a half ago

Q. Where? A. At the Shope Brick plant.

Q. What were they doing?

A. Looking around.

Q. Just describe to the Court what you observed them doing at the Shope Brick plant?

A. Why, I first took notice of them, they were walking around looking at the dry kiln. They came over and asked me what was the proportion of cement I used in mixing the concrete. I told him what I used. They went on talking a little bit, and I didn't pay no further attention to them, and they stepped off the platform where I worked with the concrete mixer, and says: "What is this thing?"

(Testimony of William G. Fielder.)

"That is a blower or fan we use for drying bricks." And I stepped down to turn [100—42] off the button. Just then our foreman walked out the door up there from the steps above from the other department. Before I could get to see what he was after, and doing any further than that, Mr. Ward and Peterson, these two gentlemen, rather—I didn't know their names at that time, walked out in a hurry. I just stood and looked at them. Thinks what's the matter with them fellows? What are they in such a hurry about? And watched them clear out the door; that is how I come to recognize them again, otherwise never paid any further attention to them.

Q. When did you see them again, Mr. Fielder?

A. Here on May 14th, when they were at the plant.

Q. This last May? A. Yes.

Q. This month? A. This month.

Q. Were there other workmen there at the time you were there? A. Yes, sir.

Q. What is your position in the plant with respect to other workmen?

A. Why in mixing the concrete with these other workmen.

Q. Where are they with respect to where you are?

A. They are down below; I am up on a platform where the concrete mixer is; they work around that platform.

Q. Were there other workmen at the platform or below the platform at the time you were on the platform? A. Yes.

(Testimony of William G. Fielder.)

Q. What were they doing?

A. Making brick.

Q. What kind of brick?

A. Face brick. [101—43]

Q. Do you remember what kind of face brick they were making?

A. I couldn't say positive whether they were cream, but they were a wire cut brick, may have been red.

Q. Did you see them talking with other workmen?

A. No, sir.

Q. How long were they there at the plant?

A. Well, to the best of my knowledge, probably fifteen minutes.

Q. Do you know Mr. Claude C. Clark?

A. Yes, sir.

Q. Does he work in the same part of the factory you work in?

A. No, sir, up in another department.

Q. Is it partitioned off? A. Yes, sir.

Q. How many machines were working there by the other workmen? A. Three machines.

Cross-examination.

(Questions by Mr. ATKINS.)

Do you remember the names of any of the men working with you in the plant when Ward and Peterson visited it as you state? A. Yes.

Q. Who were they?

A. One was Mr. Rohr, one Mr. William Harkin, and one Fred Seefer.

Q. You are sure that those were all there?

(Testimony of William G. Fielder.)

A. Yes, they were all three there.

Q. Do you know whether they saw?

A. They undoubtedly saw the men but whether they took any notice of them I don't know, I couldn't say. [102—44]

Q. Do you notice any change in Mr. Ward's appearance?

A. I should say he was heavier, here to-day, a little.

Q. He is bigger now than he was then?

A. I think so.

Witness excused. [103—45]

TESTIMONY OF CLAUDE C. CLARK, FOR PLAINTIFF.

CLAUDE C. CLARK, a witness on behalf of the plaintiff, being first duly sworn, testified as follows:

Direct Examination.

(Questions by Mr. RANKIN.)

You live in Portland, Oregon? A. Yes, sir.

Q. By whom are you employed?

A. Shope Brick Company.

Q. How long have you been employed by the Shope Brick Company? A. Five years.

Q. In what capacity?

A. A year and a half as a helper, three years and a half as a brickmaker.

Q. Whereabouts in the plant do you work with regard to the other workmen, the majority of the workmen in the plant?

A. In the mantel department.

(Testimony of Claude C. Clark.)

Q. Is that separated from the main part of the factory? A. Yes.

Q. How? A. By a board partition.

Q. Do you know Mr. Ward or Mr. Peterson.

A. I don't know Mr. Ward. I know Mr. Peterson.

Q. You do know him? A. Yes.

Q. How long have you known Mr. Peterson?

A. To know his name, since the 14th day of May.

Q. This May? A. Yes.

Q. When did you see him prior to that?

A. As I recollect, about two years ago, maybe it might be a little less. [104—46]

Q. And where did you see him then?

A. I saw him in the mantel department.

Q. What was he doing?

A. Well, he came in through the door from the yard where the brick machines are, he came in there and looked around; finally he came up; I was making tile at the time; he came up to the stack of tiles I had there, I guess must have been twenty-five or thirty foot; he comes up, takes a two-foot rule out of his pocket, measures the length of the tile pallet, the depth, the width, also measures the thickness of the tile, the length and depth.

Q. Did you say anything to him? A. I did not.

Q. Why not?

A. I didn't know what his mission was.

Q. Are there many visitors come in there?

A. A few.

Q. How long was he there?

(Testimony of Claude C. Clark.)

A. About ten minutes.

Q. What did he do then?

A. Stood and watched me making tile; finally he whirled around and went the way he came.

Q. Where was this? Where was the Shope Brick plant at that time?

A. East Eighth and Division.

Cross-examination.

(Questions by Mr. ATKINS.)

The Shope Brick plant was open to visitors, was it? A. I think so. [105—47]

Q. And you regarded this man whom you have testified as having seen as doing nothing but what other visitors did?

A. I never saw anybody do that before.

Q. Never saw anybody do that before?

A. Not so accurate.

Q. What do you mean by "not so accurate?"

A. Well, to take so much pains to take such measurements.

Witness excused. [106—48]

TESTIMONY OF THOMAS BILYEU, FOR PLAINTIFF.

THOMAS BILYEU, a witness called on behalf of the plaintiff, being first duly sworn, testified as follows:

Direct Examination.

(Questions by Mr. RANKIN.)

Where do you reside, Mr. Bilyeu?

A. Portland, Oregon.

(Testimony of Thomas Bilyeu.)

Q. How long have you so resided here?

A. For about eighteen years.

Q. What is your profession?

A. I am a mechanical engineer.

Q. What have you done to qualify yourself in that profession?

A. Graduated at the Oregon Agricultural College with the degree of B. S. in Mechanical Engineering, and took a post-graduate course at Cornell University in the same line.

Q. Have you ever been an expert in litigation?

A. I have.

Q. Along the line of your training?

A. Once or twice.

Q. Have you made a careful study of the Shope Patents? A. I have read the one in question?

Mr. ATKINS.—Do I understand this witness is to be qualified as an expert in cement construction?

Mr. RANKIN.—I haven't so qualified him as yet.

Mr. ATKINS.—I notice that.

Q. You said you had read the Shope Patent?

A. I have.

Q. Have you seen the workmen operate in the Shope Brick plant? A. I have.

Q. What experience have you had in the matter of cement and cement construction and manufacture of cement products?

A. I have had some experience.

Q. And what is it, please? [107—49]

(Testimony of Thomas Bilyeu.)

A. Extended over a period of a number of years contracting.

Q. What construction?

A. Well, I had the shore work on the Broadway Bridge here as one of the jobs I was on; handled the work personally. A number of other structures around Portland; on Kings Heights in this city all of the concrete walls; the McCleay Boulevard; Grand Oak Hotel foundations, in Portland.

Q. I don't know whether you testified to this or not. You have seen the workmen operate in the Shope plant? A. I have.

Q. How long have you observed them operate there?

A. I have been over there a number of times watching their operation.

Q. You may just briefly detail to the Court what that operation is.

A. The aggregate of sand and cement is tamped there, depending on what they are making; if it is faced brick they are making it is tamped by mechanical operation, the machine being manually operated, into the molds. The surface material is then struck or raked from the surface. Then the water and cement is applied to the surface of the brick, and the same is agitated, different workmen having a little different technique in the method of operating but in the main it is the same. Then the final surface treatment depends upon the character of the bricks that they are making, that is, if to be wire drawn, or whatever the surface trim is to be.

(Testimony of Thomas Bilyeu.)

Q. After you have the green brick or green block will you then in more detail explain just what is done there at the plant; after you have the green block in the machine.

A. After you have—

Q. The green brick in the machine; just describe the further steps in detail. [108—50]

A. I notice some of the workmen, they usually have a water pot in their left hand, and a cement bearing carrier in their right hand, and they ply the water across the brick and then back two or three times to thoroughly coat the surface of the brick. It is then agitated with an instrument to thoroughly agitate the surface coating of the structure.

Q. Would you say that that agitation was with pressure?

A. With some pressure, yes, I would say that it was.

Q. And what is the principal function of that agitation?

A. To thoroughly mix the materials that have been applied upon the surface.

Q. What becomes of this moisture that is then upon the face of the brick?

A. In my opinion it would have a tendency to enter the brick structure.

Q. Doing what after entering?

A. Filling up the interstices or pores of the brick.

Q. Have you seen the defendants operate?

A. I have.

(Testimony of Thomas Bilyeu.)

Q. Where?

A. At the plant of Ward and Peterson in Portland, Oregon.

Q. And when was this?

A. On the afternoon of May 14, 1924.

Q. Will you describe in detail to the Court what was done in the manufacture of the face brick as you observed the defendants in their operation?

A. The faced bricks were made in two machines one of which was a manually operated machine. The material was shoveled into a hopper or upon the machine until the brick molds were filled. It was then rammed with a hand rammer; the surplus material was then struck from the face of the brick. Previous to that, upon an elevated platform perhaps three feet high [109—51] and three feet square, I would say, a cementaceous material was placed and with a trowel a crater was made in which water was poured. A trowel was then used to make a mortar of the same material. It was then applied upon the face of the brick with a trowel, going back two or three times for more material until a complete surface coat was created. Then a whisk-broom was used; the whisk-broom was first dipped into a barrel of water; the face of the brick was then stippled where the coating had been applied with the trowel. They went back on at least two occasions for additional liquid, Mr. Ward being the brick-maker, stated that the broom having not been used and being dry didn't work as well as it would

(Testimony of Thomas Bilyeu.)

had it been wet or had been thoroughly saturated with water before.

Q. Mr. Bilyeu, in what you observed there in your opinion was that the same or substantially the same as indicated in the Shope invention.

Mr. ATKINS.—Object to that. The witness has not qualified as an opinion expert.

COURT.—I think he can answer the question for what it is worth.

A. In my opinion the result was the same.

Cross-examination.

(Questions by Mr. ATKINS.)

You have testified, Mr. Bilyeu, that when, what we will call the surface coating, is applied to the surface of the formed brick, there is a tendency of the cement to enter the pores of the brick.

A. I did not intend to testify—

Q. Did you intend to testify that there was a penetration or only a tendency towards penetration? [110—52]

A. In my opinion there is a penetration.

Q. That is purely a matter of opinion?

A. Purely.

Q. You have never tested it out and investigated it? A. Not to the degree of measurement, no.

Witness excused.

Plaintiff rests. [111—53]

TESTIMONY OF ANGUS FLEMING, FOR DEFENDANTS.

ANGUS FLEMING, a witness called on behalf of the defendants, being first duly sworn, testified as follows:

Direct Examination.

(Questions by Mr. ATKINS.)

Do you live in Portland, Mr. Fleming?

A. Yes, sir.

Q. How long have you lived here?

A. Thirty-six years it is since I made my home here, and kept my family here all the time. I was away some of the time; of course, kept my family here and made my home here, my residence.

Q. What is your occupation?

A. I am inspector for the city of Portland at present on the public works. Have been for over twenty years now.

Q. In that capacity have you had any experience in cement, and in the construction of articles from cement? A. Yes.

Q. Please state to what extent.

A. Well, when I went to work for the city I was counted an expert by others, and so have been in court several times right on that matter, and been in charge of cement work there—in charge of all the permit work for quite a while. Was chief inspector for over six years, which takes in all the concrete pavements, sidewalks, walls and such like.

Q. Are you acquainted with Mr. Ward?

A. Yes, sir.

(Testimony of Angus Fleming.)

Q. How long have you known him?

A. Well, I think about '08, I think it was, when I became acquainted with him first; he was a foreman for a contractor. [112—54]

Q. Do you know what work he was engaged in at that time?

A. Sidewalks, steps, street work, pavement construction, anything in connection with that.

Q. Did you regard him as an expert artisan in cement construction?

A. Yes; I counted him a good, fair man at it, but like the rest of us, of course we had something to learn from one another always. Still learning.

Q. I hand you Plaintiff's Exhibit 1, which is a copy of the patent sued upon, and will ask you to state whether you are acquainted with the contents thereof.

A. Well, I read part of it once; that is all that I read. The portion here explaining—I couldn't pick it out just now—explaining where the patent is taken, I believe this is it.

Q. And you are more or less acquainted with this? A. Oh, yes, yes.

Q. In Claim No. 1 of that Patent, I read: "The herein described method of forming a waterproof faced cement block which consists in first forming the block of suitable material in a semi-dry state."

A. Yes.

Q. How long have you known from your personal knowledge of the making of cement blocks in a semi-dry state?

(Testimony of Angus Fleming.)

A. Well, let's see; I guess twenty-two years in the cement blocks. Now, I wish to state here, too, that according to where we put concrete, we would use the semi-dry, no matter where it was. In sidewalks in certain places we had to use the semi-dry. While I am not a great believer in semi-dry cement, yet we had to use it.

Q. And that use of the semi-dry cement mixture extends back to your knowledge for a period of twenty odd years? Yes. [113—55]

Q. Did you ever apply water to such a block or structure?

A. If we wished to put any coating on it.

Q. But you did it?

A. Oh, yes, certainly; there was no other way to do it.

Q. How long have you done that?

A. Take, for instance—it is comparatively the same thing—a wall or anything else—after we strip it, and wish to plaster it, we had to put water on first, and then plaster it.

Q. What do you mean by plaster in that connection?

A. Laying it on, putting it on with a trowel, exactly as has been described here; putting the face on the brick.

Q. In putting that coating on the wall, for instance, it was sometimes made of cement?

A. Certainly; cement and sand.

Q. Cement and sand. Which do you mean? Do you know it to be made of neat cement mixture?

(Testimony of Angus Fleming.)

A. Well, no, neat cement don't work well because it cracks, what we call map cracks in it if you make it too rich; or, if you have a first-class cement. We used to use a cement a few years ago called Alsen; if you didn't use more sand in that than you did in the average cement, we had what we called map cracks because it was too rich; it was pretty good cement; best cement I ever found.

Q. Neat cement would make a coating, but it would crack?

A. We are apt to have map cracks in it, yes. Spoil the looks of it.

Q. Then the making of cement blocks from cement, semi-dry mixture of sand and cement, and the application of moisture or water and cement to that block has been known to you for some time?

A. We have been putting in sidewalk for—Oh, I suppose right in this city ever since I came here they have been using exactly [114—56] that same thing. In fact, the Ordinance called for that making to a great extent; semi-dry bricks, we had to put it in there dry enough and tamp it until we brought the moisture to the surface or were practically semi-dry, and then put the coating on, put the facing on it and trowel it in.

Q. What was the facing you troweled in?

A. Cement and sand.

Q. And that was the water that appeared on the surface or did you add more water?

A. We added more water.

Q. The water that arose to the surface from the tamping was comparatively small in quantity?

(Testimony of Angus Fleming.)

A. It depended on how damp the concrete was. If we happened to get a bucket or two too much water in, we had more moisture come to the surface.

Q. A block made of semi-dry mixture would contain pores, would it not? A. Certainly.

Q. What would you mean by pores in that connection? A. Well, I would say voids.

Q. It would include all voids.

A. Yes, I would say all; we never use the word pores; we would say voids.

Q. And what would you mean by voids?

A. All things are porous, even a glass bottle; it is porous, you know that.

Q. And in your language you would refer to a glass bottle as having such voids in it as you have referred to?

A. No; it is very hard to stick cement on glass, because the voids or pores are not large enough, so it would be pores. [115—57] You want a certain amount of roughness if you are going to stick cement on.

Q. If you apply, say a mixture of cement and water to the base of a semi-dry block? A. Yes.

Q. What will be the result?

A. That is, if you go to put that mortar on there?

A. Yes.

A. It depends on how much dampness there is in the block and how wet you make your facing that you are going to put on there.

Q. Will the cement mixture of the coating enter the pores of the brick?

(Testimony of Angus Fleming.)

A. To some extent if you use water enough and left the water in first before your cement.

Q. You mean to say that the cement will go down into the pores of the block?

A. Oh, to a slight extent, by being wet and using pressure.

Q. What do you mean by a slight extent?

A. Well, I don't know as you could call what the depth would be; you are not going to force it very far in an ordinary brick block; not very porous of course. In very coarse material, for instance, if you have used a great deal of gravel and little sand, would have large pores in it, a lot of holes you can force that facing down into, to some extent more than if you use a large quantity of sand and a small quantity of gravel.

Q. If you made a brick of sand and applied a face coating to that brick or block so made, would the cement enter the pores of that brick?

A. Very little; very little. Will adhere to very little points in it. [116—58]

Q. Will it penetrate further than the surface of the sand particles which are exposed?

A. No, only just in between the sand particles.

Q. It wouldn't enter below the exposed sand particles.

A. Not to amount to anything; you might see with the magnifying glass it had gone down, but it would be very little.

Q. Have you had any experience in the effect of

(Testimony of Angus Fleming.)

pouring or applying a mixture of water and cement to sand, a sand-bed, either tamping or otherwise?

A. Just sand-bed, pure sand, clean sand?

Q. Yes.

A. If you will mix sand—at least cement and water together—and you have a pocket in the sand there, you pour that cement in the sand—take, for instance a mortar, you can make it a very thin mortar of cement and water—and you pour it into that pocket, the cement will not penetrate to amount to anything; in fact, it won't penetrate at all, because the cement will immediately put a coating right over that sand and stop it going down. Of course, a certain amount of water will seep through and gradually seep through the sand, but the cement will not, because it is like a sieve there; in other words, like I have heard that they do—I never done it—but I hear them talking about purifying some nice wine, and sift it through sand; take all the fine—I don't know what you call it—cloudy stuff, out of it; it is sifted out. This same result then?

A. The same result, yes.

Q. Was produced when you poured the cement mixture, liquid cement mixture, upon the sand-bed?

A. Upon the sand-bed, yes. [117—59]

Q. Would there be any difference in the result if that sand were compacted into a brick?

A. Not that I see, no; of course, when you pick that—after that sets, you take that cement out of there, lift it up after it is set hard and you will

(Testimony of Angus Fleming.)
find, of course, that the sand is all adhered to it, a coating of sand has adhered to it, or rather it adhered to the stone and sets with it, of course,—you understand what I mean?

Q. I think so; I want to be sure the Court understands it.

COURT.—I understand it.

A. Naturally, you take now a piece of putty and throw it in sand; of course, it will pick up the sand with it.

Q. But will it penetrate the sand?

A. Not to amount to anything; you will not notice the penetration.

Q. Are you prepared to say it will penetrate further than the surface particles of the sand-bed?

A. Now, that would amount to the same thing as sand there, if you take and pour it on; when you take and pick that up, you will find there is a coating of sand all over it, but you don't find but very little sand into it. We have—sometimes when we had too much, had a thin facing over, we just poured it into the sand pile, because we didn't want to pour it somewhere else around there, and we would pick it up—the next day we could pick it up and throw it in the trash.

Q. State if you know from your own experience what the effect of applying a coating or a composition of a mixture of cement and water to a concrete body would be?

A. Cement and water. Do you mean making a

(Testimony of Angus Fleming.)

mortar omitting the sand, that is, you will not make a mortar with any sand in? [118—60]

Q. No. A. Just pure cement?

Q. Just pure cement, or it might be mixed with some sand, but substantially a mixture of neat cement and water.

A. Well, yes, to put that onto a body of concrete.

Q. Yes; have you had any experience in that line?

A. Yes, a great deal of it. It amounts to the same thing as plaster on the wall.

Q. State, if you remember, any particular instance in which you have done that?

A. Any particular instance that I have done it?

Q. Any particular instance in which you have done that, applied a mixture of cement and water to a concrete structure.

A. It comes to my mind now, where was quite a number of men working. Soon after I went to work for the city we built the Grand Avenue bridge, the abutments of which was made of rough concrete stacks, which was just concrete poured in there, leaving a rough face and pebbles and such like you could see, and left pretty rough and it had to be plastered over. I said it better have some plaster put on and the foreman said, "I have a couple of handy men there," and he put that handy man there and he couldn't do it; in the first place, he didn't know how to pick up that plasterer's trowel—there is a certain way to use it—he took the trowel this way. Of course, there was quite a number of men working there, and they all laughed at him; finally

(Testimony of Angus Fleming.)

I got down on the platform where he was, and says, "Let me show you," picked up the hawk that he had there, and got some mortar, took it myself and touched it up. The first thing that I done before I done that was to take a brush like a calcimine brush—a wide brush—and a bucket of water, and throw the water all over that wall to dampen it; in other [119—61] words, to get it to adhere. It dries too quick; you can dry cement too quick. Good thing to keep cement all you can from setting. After that was thrown on and the surplus water ran away I took the cement and faced it up. That is one instance right here in Portland, where I was doing it in front of everybody when I come to work for the city. If I had not done this many times before, I would not attempt to go down before all that crowd working there and take a lot of men, and show the men how to do it.

Q. What is the difference between the process described in the claims of the patent and that which you have just described?

Mr. RANKIN.—I don't understand that this witness is in any way qualified as knowing what the process used by Mr. Shope is. He said at one time he read a part of the patent.

COURT.—Don't know whether he knows what the process is.

A. I did read it down here one night. If you will just read me the section of it that states that, I will tell you. Of course, take that as a whole, it seems to me a lot of repetition there.

(Testimony of Angus Fleming.)

Q. Claim 1 reads as follows:

COURT.—The latter part of the claim, applying the cement.

Q. —"Forming the block of suitable material in a semi-dry state, applying water to the face of the block in a sufficient quantity to enter the pores or instices thereof, and adding cement to the water, whereby the cement will enter the pores or interstices with the water." Is there any difference between that process as you understand it and the process which you employed on the Aqueduct Bridge—did you say?

A. Yes, as far as I understand that one I read—I remember reading that one; of course, when you repeat it I remember [120—62] very distinctly about reading it, and it came to my mind something years ago, I suppose thirty-six years ago, we were doing some cement work; we got the work a little bit too wet perhaps; then we took dry cement and sand mixture together, perfectly dry, not semi-dry at all, and sprinkled it over it and *the* trowelled that in because we had a surplus of water.

Q. That you say you did?

A. That I did I guess thirty-six years ago; more than that; I think very near forty years ago.

Cross-examination.

(Questions by Mr. RANKIN.)

Mr. Fleming, take this from me: That you have a block formed from sand and a semi-dry mixture you call it—semi-dry block.

(Testimony of Angus Fleming.)

A. Regular concrete sand and gravel; just make the block first.

Q. Sand and cement. Taking a cement block, usually formed by pressing or tamping in a mold a mixture of sand and cement in damp or semi-dry state? A. Yes.

Q. So that block would be immediately removed from the mold? A. Yes.

Q. Take that block. A. Yes.

Q. Pour on it water, spread over the water cement; would the water serve both to carry the cement into the pores and cause crystalization of the added cement?

Mr. ATKINS.—If your Honor please, witness has not been examined as a technical expert but as a skilled artisan. I object as incompetent.

A. I am quite willing to answer the question. If I understand you right, if you make a block of semi-dry, and immediately go to put the face of it—I would say you have reference to?

COURT.—Cover it with water and sprinkle cement over it, [121—63] will the water carry cement into the block?

A. If you will put the water on first to some extent it will. This will depend entirely on how porous it is, or how large the pores are, of course, as I explained before.

Q. Then the patentee is right is he not if the patentee has claimed that quality?

A. In which? That he can put it on?

Q. Just as I described to you?

(Testimony of Angus Fleming.)

A. But there is no man living can put it in.

Q. Just answer the question yes or no and then qualify it. The patentee is right when he says that? A. No, no, no. I say he can't do it. It depends on how porous it is I say. If he has got naturally all pebbles, which I have seen at times which you could put your finger down in between, naturally the cement and water will penetrate in, but if there is a quantity of sand in it, say a one, two, four mixture, something that way, it will penetrate but a very small distance.

Q. Did you find any such statement as that in the question I gave you?

COURT.—You didn't describe the aggregate at all in your question.

A. No, you are not describing anything exactly.

Q. Well, you know the ordinary semi-dry block of which we make brick?

A. Yes, I know what brick is.

Q. You can't put your fingers down through the pores of that sort of aggregate can you?

A. No.

Q. You take that kind of block and put the water over and spread [122—64] over that cement, will the water take the cement into the pores of your brick? A. A very small distance.

Q. How do you know that?

A. Because I have tried to make experiment tests. I would like you to show me a block, and I suppose you have samples here, where it had penetrated.

(Testimony of Angus Fleming.)

Q. We would be very pleased to do that.

A. I would like to see it.

Q. Do you know the Shope method as described in the patent?

A. Yes, what he has over there, that is that patent there.

Q. Do you know whether all that was read was the Shope method?

A. I suppose so; all that is on that piece there.

Q. Did you ever see brick made according to that method?

A. No, not according to the way—yes, of course when I say— it is not strictly yes, and yet I have, but not brick—I am not a brickmaker, but when it comes to concrete I don't get behind anybody.

Q. I don't understand your answer to the question. You will pardon me; it is possibly my confusion. A. Yes.

Q. Did you ever see brick made according to the Shope method as described in his patent?

A. No. No, because he says there that he uses without pressure and how you can put that on without pressure, I cannot understand.

Witness excused. [123—65]

TESTIMONY OF G. E. STARKS, FOR DEFENDANTS.

G. E. STARKS, a witness called on behalf of the defendants, being first duly sworn, testified as follows:

Direct Examination.

(Questions by Mr. ATKINS.)

You are a resident of Portland, Mr. Starks?

A. Yes, sir.

Q. How long have you lived here?

A. Since 1901.

Q. What has been your occupation during that time?

A. The first seven or eight years I was here I was foreman of a concrete crew, foreman and engineer of a concrete crew.

Q. Since that time what?

A. I have been with the city of Portland as Inspector of Public Works.

Q. In discharge of your duties as Inspector of Public Works, have you had anything to do with concrete construction?

A. Yes, sidewalks, curbs and pavements and all that class of work.

Q. What acquaintance, if any, have you with this patent which is sued upon. I show you copy of it.

A. I have heard it read several times, is all. I have just heard it.

Q. But you understand the meaning of that patent as far as the invention is concerned?

(Testimony of G. E. Starks.)

A. I think I do, sir.

Q. How long have you been personally acquainted with the manufacture of blocks or bricks from a mold in a semi-dry state?

A. Oh, possibly twenty-two or three years.

Q. Have you during that time known of the application of a coating to the brick, consisting of a mixture of water and cement?

Q. Pardon me, but in speaking of a brick you mean a block?

Q. Block, as block is the term used in the patent and refers to any solid structure and so stated in the patent.

A. May I explain that to you? [124—66]

Q. Talk to the Court about it.

A. May I explain that, your Honor?

COURT.—Explain what?

A. He was asking me in regard to my knowledge of dry-facing. To go back thirty years ago in the State of Michigan, my first of that work was done there, and I have followed the building business, and pillars, that is caps for pillars for porches and that class of stuff; I always use the dry facing on the caps of these posts. After I came to Portland, I was running a concrete crew for a contractor here, and he used lamp black in coloring sidewalks, and we always put that on dry. We put our top on the natural color, sprinkled over this lampblack and sand and cement; the lampblack would cut through the sand, or cement, put in proper amount; and it was sprinkled over the top, and we floated it in to

(Testimony of G. E. Starks.)

give color to the sidewalks. I had that experience with the stuff.

Q. How did you apply this facing that you speak of?

A. Take it on the caps for posts or anything of that kind, as a general thing it sets there until the cement is pretty well hardened before you can spread it, you know, and it may be several days or several weeks, but I always grouted it—that is take a neat cement and plastered it over the top, kind of the consistency of paint, rubbed it in, brushed it in, to form a bond between the coating that I put on there and then put on the top coating which is usually you stick a little form on top, and usually it is pretty wet—nine times out of ten you are in a hurry to get through in the evening, and you take some of that dry stuff and put it over the top, float her up—finish up quick to get away.

Q. If upon a block formed of this dry mixture you apply a coating made of a mixture of cement and water what would be the result, [125—67] if you will, from your own experience?

A. You mean as far as penetration is concerned?

Q. Well whatever the result is as you have observed it.

A. You have reference to a block—fresh block made of sand and cement?

Q. I have stated it more broadly than that—block of such a mixture.

A. Well, you take a block in my estimate, that is fresh made of cement, that is sand and cement,

(Testimony of G. E. Starks.)

that is just moderately, so it will hold—so you can hold it up in your hand—just moderately moist, tamp into a form and pour on cement and water, would be very little penetration to it.

Q. What do you mean by little penetration? Be any at all?

A. Well, in sand cement, if it is tamped and tamped perfectly smooth all the penetration there would be is just the little voids around the particles of sand, that is as far as—

Q. The particles of sand where exposed at the surface?

A. That are exposed, if that was put on with pressure; if that were put on with pressure it would have a tendency to float it in.

Q. Would there be a penetration into the pores of the brick upon the application of a liquid cement or semi-liquid coating?

A. If the pores are large enough, yes, sir.

Q. I know, but in the pores existing after tamping a brick?

A. There would be very little penetration. Moisture has a tendency to work up under concrete always, if you will work it and tamp it.

Q. You say the moisture has a tendency to seek the concrete rather than the concrete seek the moisture? A. I don't understand.

Q. I mean to say if you put that on there, you first wet the face of the brick and then put cement on there; which way [126—68] would the moisture go?

(Testimony of G. E. Starks.)

A. Why, the moisture will come up into your cement.

Q. In your experience is there any tendency of the cement to go down into the moisture?

A. I don't see what you mean.

Q. Speaking of your experience now, when you put cement on a moist surface what is the result?

A. The result is it just sets right over the top of the moisture there if it isn't rubbed in—worked in.

Q. What do you mean by working in? Do you mean to say that by pressure you can force that cement into the pores, or do you mean that you can stir up the surface of the green block?

A. I mean if you will take cement and water and mix it up to proper consistency, that you can work it into these pores but you could put water on that surface and put your dry cement around over your water and your water will not carry that cement down into the pores.

Q. Would the result differ or not if you agitated the water and cement on top?

A. Yes, it would be a little different.

Q. What would be the difference in the result?

A. It really would have a tendency to— the cement would have a tendency to work down into all the little open pores that were on top if you work it hard enough.

Q. I am speaking about agitation now as distinguished from pressure. If you merely stir

(Testimony of G. E. Starks.)

that up so as to make a mixture would there be any difference in the result?

A. The green surface? If you stir it up you are stirring up the fresh concrete, the fresh material that is in there and just mixing it all together.

Q. What do you mean by fresh material that is in there? [127—69]

A. For instance, if you make a block and put your water and cement on top of that block, and we will say you go to agitating it with a brush, you will brush up that fresh material that is in the bottom; your cement will work up and mix all through.

Q. You would embody some of the material of the brick into the surface coating, would you?

A. Yes, that is the idea.

Q. What would be the effect if instead of a brush you used a float for mixing the surface coating, or agitating the surface coating, if you please?

A. You can put it on carefully with a float, the same as you can with a trowel, but if you go at it and agitate it thoroughly, you will gouge up your concrete the same as you would with a brush.

Q. How long have you used a float for applying a coating composed of cement and water to a concrete surface such as is described in this patent?

A. My first experience in that was possibly thirty years ago.

Cross-examination.

(Questions by Mr. RANKIN.)

Q. Mr. Sparks, are you familiar with pavement, concrete pavement?

(Testimony of G. E. Starks.)

A. Quite familiar, yes, sir.

Q. Have you had experience in that line?

A. Yes, I am on that most every day.

Q. Are you familiar with the Hassam form of laying pavement?

A. The old Hassam they put in here?

Q. Yes. A. Yes, sir.

Q. After the crushed rock was put upon the road, what was then done under the Hassam method?

A. There were applications of sand and cement and water that were [128—70] poured onto it, and was all slushed through it.

Mr. ATKINS.—The examination as to certain kind of pavement with no evidence before the Court as to what that term means is not calculated to be very instructive.

COURT.—I suppose counsel assumes that most people know what Hassam pavement is.

Mr. ATKINS.—Well he may do so, I suppose; it has been the subject of much litigation.

Mr. RANKIN.—He has already said he knows what it is.

Q. Did the cement and sand penetrate into the voids in that pavement?

A. Those rocks, yes, sir.

Q. Now on the same principal would you say it would pentrate into these bricks?

A. No, sir, a different thing altogether.

Q. You understand me, don't you, that the voids or pores in the pavement would be much larger than in the brick? A. That is the idea.

(Testimony of G. E. Starks.)

Q. And consequently much smaller in the brick than in the pavement? A. Yes, sir.

Q. With inverse reasoning. Wouldn't there be some penetration even in the brick?

A. Well, there is some little penetration as far as the—in these particles that stand up on top there, it will run down around the sand, but it will not penetrate that brick.

Q. What would you say would be the distance in penetration?

A. I couldn't give you any figures on that.

Q. Would it be approximately three-eighths of an inch? A. Three-eighths of an inch?

Q. Yes. A. No, sir.

Q. You are certain of that? A. Absolutely.

Q. Did you ever make any experiments?

[129—71]

A. I never have; not of that—not of brick.

Q. Let me, in order to clarify my question, show you Plaintiff's Exhibit 7, which represents certain brick in a machine. Did you ever have any personal experience with making brick? A. No.

Q. As disclosed in that photograph?

A. No, sir, I have not.

Q. Upon what do you base your statement then, please, that there would be no penetration in the case of a brick of that nature raw—green, to which is applied water and cement?

A. What do I base it? I will take your Hassam for instance: When we pour the Hassam on the street to keep the water out of the sewers, where

(Testimony of G. E. Starks.)

these inlets are in we throw a sack over them, a gunny-sack, and throw a shovelful of sand over the top of that gunny-sack, make just a little bank of sand along the side; if we don't do that we fill up our sewers, fill the pipes with concrete, with cement, hardening in there and stopping them up, but after you get done pouring that street, this sand that was in there, there was a coating of cement over the outside of it, but you pick it up and there was not a bit of cement went into the sewer; never penetrates that sand.

Q. Now, you are basing the statement that water and cement will not penetrate into a brick as shown in this exhibit upon that experience that you have had? A. Yes, to any particular depth.

Q. Is there any other experience that you have had upon which you base that conclusion?

A. Why nothing that I can think of right at the present time.

Q. As I understood your direct testimony, Mr. Sparks, in answer to Mr. Atkins' question you said that there would be some penetration?

A. What I mean by some penetration was the sand—as I understand we were speaking of mixture of sand and cement that is put [130—72] in the form, and in the sand that was sticking up, these particles of sand, why there would be penetration just to fill these little voids around the sand there.

Q. Then the penetration would not be any deeper

(Testimony of G. E. Starks.)

than the sand particles on the surface of that brick?

A. If it was put in with water and the stuff sprinkled on it, I said the water would not carry it in.

Q. It would not carry it in any,—let me understand the distance to which it would carry it in. It would not carry it in any further than the full diameter of the sand particles on the face of that brick?

A. Without they was voids down further—those voids in there, don't you see? That is all.

Q. If there were voids underneath would the water continue to take the cement down in the lower voids?

A. If they were large enough. That is if the voids were large enough. I don't believe you would get them large enough on sand.

Q. Or if the cement were small enough?

A. The cement is certainly fine enough.

Q. What is the degree of fineness in a block which would prevent—where the water would not take the cement into the voids?

A. Well, I couldn't give you any figures on the fineness of these voids that it wouldn't carry into. I am not an expert on that stuff at all.

COURT.—If you had one of those bricks without any coating—before the coating was put on, just as it was made in the machine and should pour a cup of water on it, what proportion of the water would go down in the brick?

(Testimony of G. E. Starks.)

A. Well, your Honor, I have taken lots of bricks and it would hold whole cups of water but not of these cement brick. The cement brick is something that I— [131—73]

COURT.—I refer to these bricks we are talking about now. I don't mean clay brick.

A. The consequence would be, you pour a cup of water on that brick, your Honor, and when they take their form away the brick would fall down.

COURT.—I don't understand what you mean.

A. If I understand the way they make these bricks they are all in little forms and if you pour a cup of water before that form was released on to that material that is in there, when you took your form away the brick would fall down.

COURT.—Suppose you left the form there, don't take the form away; just pour the water on the brick in the form?

A. As moist as that is the water will go clear down, clear through it.

COURT.—If that water contains in solution cement, it would take some of the cement with it, wouldn't it?

A. The reason I form that conclusion as I said is on account of the drainage, when you are putting in Hassam pavement and pour the cement and water and sand, this last coating that goes into it to fill in the pores. Now where it runs down to fill up the catch basins, to keep it out of the catch basins, we put some sand there, and where in one case that sand is full of cement—the water went through but the sand don't. That is the way we keep it out of the sewers.

(Testimony of G. E. Starks.)

COURT.—The water wouldn't carry the cement in solution?

A. No, that is the reason I say it don't take it. In fact, I don't know just how they will take it in there but very little.

Q. Have you had any experience with cement brick?

A. I don't know anything about cement brick.

Witness excused. [132—74]

TESTIMONY OF ROY WARD, FOR DEFENDANTS.

ROY WARD, one of the defendants called in his own behalf, being first duly sworn, testified as follows:

Direct Examination.

(Questions by Mr. ATKINS.)

You are one of the defendants in this case, Mr. Ward? A. I am.

Q. How long have you lived in Portland?

A. Since 1907.

Q. What has been your business during that time?

A. Well, following cement work, except I went to work in the sheriff's office in—when was it Hurlburt went in—'15—went in in '15. I worked '15 and '16 for him and I was with the O. W. R. N. in '17; '18 and part of '19 for the O. W. R. N.

Q. You say you have been from the time you came here a worker in cement construction?

A. I have.

Q. How long have you been engaged in such work?

(Testimony of Roy Ward.)

A. I went to work at construction work when about nine years old, carrying mortar.

Q. How old are you now?

A. Will be forty the 22d of June.

Q. You have been making brick in Portland?

A. Yes.

Q. How long?

A. We started last year about the first of the year, getting our building ready.

Q. Did you make faced brick? A. We did.

Q. Are you making them now? A. I am not.

Q. Why did you cease making faced brick?

A. An injunction issued by Judge Wolverton.

Q. How did you make these faced brick?

A. First the sand and cement was put in a mixer and mixed, and put in a machine and tamped. The top of it was raked [133—75] off by a hopper that slides over the face of the plates, and on the side had a table like a plasterer's mortar board with neat cement on that, or sand and cement, whatever I want, and I mix that up first; mix that up first before I make any brick for this neat cement, especially if warm weather—let that stand or set for a few minutes, and break the initial set, while you are getting your concrete ready—sort of break the initial set, that is the first set. When we make our brick we mix this up, well mix—use two trowels, and break it up; use one in place of the hopper the plasterer uses; plaster that on top; if a smooth brick, I quit there; makes it smooth, absolutely smooth brick; that is all done. The ends of this machine lets down with two little levers. Hold one trowel on the top, use it as a

(Testimony of Roy Ward.)

straight edge and plaster on the ends of these bricks which stick in the front of the machine about one-sixteenth of an inch, which allows us to place the plaster; they stick in the face of the machine about one-sixteenth of an inch so as to give us something to work on; stipple—have my brush—keep my brush in a bucket of water. I have tried practically all the brushes I could find; I find the best is a common fifteen-cent store whisk-broom; keep it in a bucket of water, and keep it well soaked so the ends of it is not sharp and won't dig up your work, and make a rough finish, although middling smooth on account when clear no pockets or holes have dried in it; makes a nicer looking job to my mind than rough brick, by keeping the brush soaked. Then take out and set away to cool.

Q. What sort of a trowel do you use in the manufacture of your brick for applying the coating mixture?

A. Use a common Marshalltown trowel—common plasterer's [134—76] trowel.

Q. What is that made of—metal?

A. Metal—steel.

Q. Why do you use metal?

A. It slides; slides over; presses; presses right in. Trowels it right in.

Q. Why do you not use a wooden float for instance?

A. Well, I have never tried wooden float. Where I learned to handle a trowel we didn't use a float on that kind of stuff. Of course was mostly blocks there.

(Testimony of Roy Ward.)

Q. You have seen the wooden floats used in the Shope machine? A. I did.

Q. Shope Brick Company? A. I did.

Q. What difference in the operation of that float and your metal trowel is there, if any?

A. Well, a wooden float has more of a suction; wooden float, it sucks, pulls the moisture right up and dries it all out and stirs the sand up that is down at the root of this deep cement, pulls it right up; rolls it up. Where the trowel is smooth and you put it on there, you slide right over just the same as smoothing that wall.

Q. In using a metal trowel, do you agitate the surface coating?

A. No, not with metal trowel you don't agitate; it smooths it.

Q. Is it your purpose in applying the surface coating according to your method to stir up the coating or to agitate it in any way?

A. No, I try to keep away from agitating.

Q. Why?

A. Well, I think I can make brick faster, and I think it makes a neater job, eliminates work.

Q. What would be the result if you did stir it up according to your experience?

A. Well, you would roll up your sand in your top more. [135—77]

Q. How long have you been practicing the method which you are operating under at present in your plant, or were up to the time the injunction issued?

A. You mean on the brick only?

Q. I mean the patent reads: "The word block is here used generically including a brick, tile or

(Testimony of Roy Ward.)

other mass of any shape or size as well as a block technically so called." Within that?

A. Always used a trowel.

Q. How is that?

A. I always used a trowel. Never used a float applying facing at all.

Q. How long have you used a trowel in applying surface coating to such a body?

A. Well, ever since we have been making face brick here, and done it in Iowa when working for Grindstaff in their block plant, although their output of blocks was very small, mostly silo staves.

Q. What is the length of that period you just referred to?

A. Well, we got that little machine I imagine probably in May of last year, so the first brick we made in Oregon, or used any of that kind of stuff on brick—

Q. You misunderstand my question. I am asking you how long you have used this method of applying coating to a cement block?

A. Well, I worked in that plant in 1905 and 1906 —part of '04, '05 and '06, except in the winter there was nothing doing.

Q. What do you refer to by that plant?

A. Plant in Iowa, where my home was.

Q. You are doing nothing different from what you did then? A. Absolutely not.

Q. Have you ever made brick or cement blocks otherwise than you showed the representatives of the plaintiff on May 14, of this year?

A. No, sir. [136—78]

Q. Always the same?

(Testimony of Roy Ward.)

A. Always made them the same.

Q. And that is the same way you have done ever since 1904 you say?

A. Yes, when I was working at that plant making blocks and silo staves.

Q. You have seen the operation of the so-called Shope method in their plant? A. I have.

Q. That was on the same date, May 14th?

A. That was the same day.

Q. What difference if any did you discover between the process practiced there and that which you have used for the last twenty years or so?

A. Well, outside of making bricks; we never use that making blocks, that is building blocks and that kind of stuff, but for use on walls and irrigating ditches, and anywhere that stands where the concrete will run off, wet facing will run off; I use that same method.

Q. When did you first visit the Shope Brick Company plant or works?

A. The first time I was ever in that Shope plant was the day we were all in there together. That is the first time.

Q. You have heard the witnesses testify that you were there a year and a half ago? A. I did.

Q. Do you deny it? A. I do.

Q. Is there any difference between your appearance now and the time when you were said to have been there?

A. At the time I was said to be there I weighed about 295 pounds.

Q. What do you weigh now?

(Testimony of Roy Ward.)

A. About two hundred; have got about eight inches of belt [137—79] to spare.

Q. Have you had any experience, Mr. Ward, in determining whether a mixture of cement and water applied to a block made of a semi-dry mixture of cement and sand—what the result of applying a mixture of cement and water to a semi-dry brick is?

A. I never applied it to a semi-dry block.

Q. What?

A. Never applied it to them two articles, block and brick. I have to walls, bridge caps, porch steps and that kind of stuff.

Q. While you were making brick you applied it, didn't you?

A. Not in dry mix, no; we used our stuff wet mixed.

Q. Your brick is not a semi-dry brick?

A. It is a semi-dry brick, yes, but coating, the cement is mixed on a board before it is put on the brick; never apply dry cement and water to the brick. I don't know what the result will be there, but I know on steps, porch caps, and that kind of stuff.

Q. On steps and porch caps, what is the result?

A. Sprinkle well with water, then sift cement on it and get on with a float and float it down and trowel it so you get through quicker, especially in cold weather, when slow set or a steep wall.

Q. Have you observed whether penetration of the coating mixture into the body of the object?

A. Not unless you might float it in.

Q. If you floated it in, what would be the result?

(Testimony of Roy Ward.)

A. You would roll it up; roll up the concrete underneath in your top.

Q. The effect would be to make a less rich mixture of the cement than that which was originally applied? [138—80]

A. It would. You stir the sand up in it.

Cross-examination.

(Questions by Mr. RANKIN.)

Mr. Ward, you said you used a fifteen cent whisk broom to stipple with? A. Yes, sir.

Q. Is that brush wet or dry?

A. We keep it in a bucket of water all the time.

Q. And what was the purpose of that?

A. If that brush gets dried out the bristles is real sharp and stiff; it bunches it up where if soft will kind of fuzz out and acts more like a sponge, I mean for the softness of it. You will have to trim them up once in a while—will be all feathered up.

Q. The reason you keep the brush in a bucket of water is to keep the brush soft?

A. You have to keep the brush moist all the time, wet when you put it in there, or it will tear off the face.

Q. And that is the only reason?

A. That is the only reason I see, unless awful hot weather and have to use water to keep from setting too fast; then throw water on there.

Q. Is there any other reason you keep water on the brush? A. I don't know as there is.

Q. If that were the only reason why would you go back to the bucket to get additional water?

(Testimony of Roy Ward.)

A. The other day when you were out there I called attention to the brush hanging on the post for some time, and was awful dry—just like a needle.

Q. That is not the usual way?

A. Lays in the water all the time; unless awful hot never use water only what is naturally in the brush. [139—81]

Q. Wait until I finish the question please. This way you illustrated to us the other day was not the usual way you make brick?

A. Only that the brush—I told you the other day that the brush was awful dry.

Q. Then I understand that there was a difference between the way in which you make brick as you showed us the other day, and ordinarily?

A. I dipped the brush in water three or four times, to see if it wouldn't soak up.

Q. And that is different from what you usually do? A. Sometimes we never touch it again.

Mr. ATKINS.—If your Honor please, he says he intends to keep the brush wet.

COURT.—I understand what he means, yes.

Q. Maybe I am mistaken, but it seems to me it is of importance. Just this question: Which would carry the most water, a brush that was constantly wet or a dry brush?

A. Well, the constantly wet brush will carry the most water when it gets all fuzzed out.

Q. You speak of agitation. Do you agitate?

A. With the trowel; no, sir.

Q. Can you agitate with a trowel?

(Testimony of Roy Ward.)

A. I doubt it; that is the flat surface. Can kind of stir it this way.

Q. No. I mean flat surface.

A. No, that doesn't agitate.

Q. You say you cannot agitate with a trowel?

A. No, I didn't say.

Q. Can you agitate with a float?

A. Oh, yes, that is what you have. [140—82]

Q. What is the difference between that and the same motion with a trowel?

A. Well, float there is some suction; big suction to a wooden float.

Q. Has more suction? A. Yes, the wood has.

Q. Suppose your float was lined or faced with metal, would there be any difference?

A. Would act the same as a trowel; would slide over the top.

Q. Do you know if Mr. Shope's floats have metal facing? A. I didn't look at them.

Q. You don't know whether they do or not?

A. I didn't look at them.

Q. They may have metal facing for all you know.

COURT.—He says he don't know—didn't look at them. How can he know any more about them.

Q. How many faced concrete brick have you made?

A. Oh, I imagine somewhere around five thousand, this time we got stopped; that is up to the time the injunction was out.

Witness excused. [141—83]

TESTIMONY OF OTTO PETERSON, FOR DEFENDANTS.

OTTO PETERSON, one of the defendants, called in his own behalf, being first duly sworn, testified as follows:

Direct Examination.

(Questions by Mr. ATKINS.)

You are the other of the two defendants in this case? A. Yes, sir.

Q. How long have you lived in Portland?

A. Since 1907.

Q. How long have you been engaged in cement construction work?

A. Well, I haven't—you mean out in our plant? Since last year.

Q. No, altogether.

A. Oh, altogether. I am not very much of a cement man. I have been with it off and on for, oh, I should judge somewhere along 15 or 16 years; not steady; just off and on.

Q. How did you make faced brick in your plant before the injunction was issued in this case?

A. Why, we tamped concrete into the molds—

Q. How do you make it?

A. Put it on with a trowel. I never made them. Mr. Ward is the man that always makes that. Takes one trowel and puts it on with that and finished the top, smooth finish, and finishes it with a fifteen cent broom, I think, anyway finishes the top, lets the door of his mold down, and his long trowel on the edge in this manner, smears it on the same as plaster on the wall, or any other part.

(Testimony of Otto Peterson.)

Q. Did you ever make faced brick in any other way than that out in the plant?

A. No, we haven't; the only way we ever made it.

Q. How long has that method of manufacture been known to you in [142—84] making articles?

A. I have seen it done 25 years ago or more. Twenty-five years ago, anyhow; 1897, that I remember of.

Q. The method which you first saw, say 25 years ago, is the same that you practiced?

A. Identically the same.

Q. Down at your factory?

A. Identically the same thing.

Q. Identically the same. A. Same thing.

Q. You were at the Shope Brick Company works on May 14 of this year? A. Yes, sir.

Q. How many times had you visited those works before that time? A. The Shope Brick Company?

Q. Yes.

A. Well, we bought our truck on the 12th day of March, and somewhere along the last part of March or first of April was the first time I ever entered the Shope Brick Company in any way. Never been near the place outside of going by it with the machine.

Q. Between that time and May 14 of this year, did you visit it frequently?

A. Well, I have been in there after bricks since the injunction.

Q. But before the injunction.

(Testimony of Otto Peterson.)

A. No, I never was in there before; never was in there before.

Q. Is it true that you were out there before the injunction was issued, measuring tiles?

A. No, sir; I never was near the place.

Q. Positively deny that? A. Yes, sir.

Cross-examination.

(Questions by Mr. RANKIN.)

Where were you, Mr. Peterson, 25 years [143—85] ago when you saw this art practiced

A. Twenty-five years ago was in St. Paul, Nebraska.

Q. Were you working there?

A. I was working there, yes, sir.

Q. Were you working in cement brick mills?

A. No, sir; working for a man; worked for him four years that ran a brick yard. Was a bricklayer. Was a cement man; done everything. I used to run the yard. Was a sort of foreman when he was not on the job.

Q. What were you doing there?

A. Manufacturing clay brick.

Q. You were manufacturing clay brick?

A. Yes, sir.

Q. Was that cement brick?

A. No cement brick back there at that time.

Q. How long ago had you known of manufacture of cement brick?

A. I don't recall the time, but has been some time. I heard about it for some time.

(Testimony of Otto Peterson.)

Q. Did you ever know it before you met Mr. Ward?

A. Oh, yes, I knew about cement brick before.

Q. Did you ever see the bricks before you met Mr. Ward?

A. No, I never worked with cement business very much myself. I am not an expert man in cement work.

Q. You don't manufacture the brick yourself?

A. No, I am not—I am not handy enough with the trowel.

Witness excused. [144—86]

Mr. ATKINS.—If your Honor please, a number of patents showing the prior art have been set up in the answer, and we wish to introduce those in evidence and have them marked as defendants' exhibits.

Patents received in evidence and marked as follows:

Hubbell Patent No. 115,475, May 30, 1871—Defendants' Exhibit "D."

Richardson Patent No. 461,890, Oct. 27, 1891—Defendants' Exhibit "E."

Goode Patent No. 518,239, April 17, 1894—Defendants' Exhibit "F."

Federici Patent No. 527,416, Oct. 16, 1894—Defendants' Exhibit "G."

Haddock Patent No. 531,842, January 1, 1895—Defendants' Exhibit "H."

Jongbluth Patent No. 587,484, August 3, 1897—Defendants' Exhibit "I."

Stevens Patent No. 624,563, May 9, 1899—Defendants' Exhibit "A" (p. 15).

Emerson Patent No. 692,644, Feb. 4, 1902—Defendants' Exhibit "K."

Davies Patent No. 703,644, July 1, 1902—Defendants' Exhibit "L."

Jaques Patent No. 723,281, March 24, 1903—Defendants' Exhibit "M."

Jaques Patent No. 748,611, Jan. 5, 1904—Defendants' Exhibit "N."

Brownson Patent No. 777,073, Dec. 13, 1904—Defendants' Exhibit "O."

Cox Patent No. 814,358, March 6, 1906—Defendants' Exhibit "P."

Porten Patent No. 818,286, April 17, 1906—Defendants' Exhibit "Q."

Bartlett Patent No. 829,249, Aug. 21, 1906—Defendants' Exhibit "R."

Brown Patent No. 833,952, Oct. 23, 1906—Defendants' Exhibit "S."

McClenahan Patent No. 850,670, Apr. 16, 1907—Defendants' Exhibit "T."

Henderson Patent No. 886,124, April 28, 1908—Defendants' Exhibit "U."

Thomas Patent No. 958,194, May 17, 1919—Defendants' Exhibit "V."

Malette Patent No. 751,089, Feb. 2, 1904—Defendants' Exhibit "W."

Mr. ATKINS.—If your honor please, one of the patents set up in the answer is patent issued May 9, 1899, to Charles W. Stevens for a process to make artificial stone, this process is one of casting cement

blocks; it is distinguished to [145—87] that extent from the making of a semi-dry cement brick. This patent is not offered in anticipation of the making of cement bricks, whether they be faced or otherwise, but it describes in Claim 1 in brief language, a process which negatives the possibility of cement mixed with water in a liquid state entering a sand mold upon which it is formed. The first claim of the patent reads: "The process of forming artificial stone consisting in molding the stone compound while in a plastic or semi-liquid state in or on a mold formed of relatively dry sand and then allow the mass to set until the sand absorbs the surplus moisture from the compound, thereby converting the latter to a solid or nonliquid form, substantially as and for the purpose set forth." Now in forming that cast stone the inventor made a mold of sand, that is to say, he used a container and in the bottom of that tamped a mold which gave form to the block cast upon it. By the aid of that method he was able to form in most intricate design.

Mr. RANKIN.—I don't wish to interrupt, but counsel has not qualified as an expert in this case. This is either argument or testimony, one or the other.

Mr. ATKINS.—It is neither. It is introduction to what I am about to say. The patent is in evidence for itself.

Mr. RANKIN.—Then what is the use defining it if it is in evidence

COURT.—What is the use of arguing now?

Mr. ATKINS.—If I may be permitted, I will state

why I am offering this. This patent has been the subject of extensive litigation. The patent was upheld by the Circuit Court of Appeals of the First Circuit, and the principle upon which the patent rests is that the mold will form a clear demarcation [146—88] between the cement and the water which is used in liquefaction. It has sustained the case, but I am advised by letter from the Clerk of the Court of Appeals that application was made for certiorari to the United States Supreme Court. I have not been able to find any reported account of that, but have a letter from the clerk. But at any rate the patent has been sustained and the theory has been upheld as fully established. The record is a somewhat extensive one, and I wrote for a certified copy of the record in that case, and intended to file it as part of the record in this case, in order that your Honor may see that it has been, as one might say, authoritatively established that a mixture of water and cement in a liquid state poured upon a tamped mold of sand will not penetrate the sand, but that it will assume the form of a casting that has fine lines as if the cement were metal and had been poured into a mold in which the metal is set. Now, I cannot file that certified copy of the record because it is loaned, but the certificate is attached to it, and I shall be glad to read perhaps one or two extracts from that for the information of the Court. The Court may find in the reported case much that appears here, but this I think will apprise the Court of a fact, established by extensive litigation in which both parties were represented by eminent counsel and which extended

over a number of years, and established the fact that a mixture of cement and water upon a sand mold will produce a separation of the water from the cement and will not permit penetration of the cement into the sand, which is the basis upon which the superiority of this patent in suit is sought to be recognized.

COURT.—When it comes to the argument, you may.

Mr. ATKINS.—May I read it in as part of the record in the case? [147—89]

COURT.—I don't think so. I don't think the decisions of the Courts, while they might be persuasive as an argument, would be any evidence.

Mr. ATKINS.—I recognize it is not evidence and am not making such an offer as evidence before the Court except in reference to the existence of a physical law. [148—90]

TESTIMONY OF RALPH K. STRONG, FOR DEFENDANTS.

RALPH K. STRONG, a witness called on behalf of the defendants, being first duly sworn, testified as follows.

Direct Examination.

(Questions by Mr. ATKINS.)

Give your age, residence and occupation.

A. I am 41 years old; professor of chemistry at Reed College.

Q. What qualifications have you in the way of

(Testimony of Ralph K. Strong.)

study that entitle you to be here as a chemical expert in this case?

A. I have studied and taught the subject of chemistry since graduation.

Mr. RANKIN.—Mr. Strong, it is a pleasure to admit your qualifications.

Mr. ATKINS.—That goes without saying, so we may proceed.

Q. You have made a study of the patent sued upon in this case? A. I have.

Q. Do you understand the invention as described therein?

A. I understand, I believe, the descriptions.

Q. I hand you a copy of Plaintiff's Exhibit 1, and ask you to read Claim 1 thereof, and explain it to me as you understand it.

A. The claim states in my opinion that cement due to the water on the original semi-dry brick passes into the pores of the brick with the water. That is the description, in my opinion.

Q. What difference, if any, is there between the invention as defined in Claim 2 and that defined in Claim 1?

A. The difference is in the last part, "and adding cement to the water, whereby the cement will enter the pores or interstices with the water."—Claim 1. "Then spreading cement upon the water and agitating the mixture to carry the cement into the interstices of the block to the required depth" in Claim [149—91] 2.

Q. Have you made any experiments or investiga-

(Testimony of Ralph K. Strong.)

tions to determine whether, under the conditions named in the patent the water of the mixure added to the semi-dry blocks will enter the pores of the block? A. I have.

Q. What is the result of your investigation?

A. I took the extreme case I could imagine. I took sand itself, which offered a maximum of voids, and placed it in the cement, which offered the maximum of penetrating ability. The sand was covered with water, and the cement added without mixing, was poured on to the sand, and allowed to set, and then the vessel in which this was contained was broken and the surface contact between the sand and the cement very carefully examined. There was no penetration, as far as I was able to determine, of the cement into the sand. Much to my surprise, there were in some cases free surfaces of cement exposed. Of course the cement had adhered to the upper particles of sand; that goes without saying; there was perfect contact there. But as far as it was possible to observe, there was no penetration of the cement into the sand layer.

Q. Did you make any further experiments to determine whether if cement were added to the mixture of the dry sand in the semi-dry state, there would be any difference in the result?

A. I added to the sand in the same condition dry cement instead of neat cement and as far as it was possible to observe, there was no difference. The dry cement had extracted water from the sand and set, of course.

(Testimony of Ralph K. Strong.)

Q. In your opinion, will the application of a mixture of water and cement applied to the face of a block result as stated in Claim 1?

A. It will not. [150—92]

Q. Does agitation affect that result?

A. It certainly does.

Q. To what extent?

A. As far as it is agitated. It is like a small boy in a mud puddle. It seems to me rather a homely example, but I can't think of anything that would illustrate the point better. The further he digs into the dirt underneath the water he is mixing, he more thorough will be the mixing. In this case it seems to me the more agitation of the upper surface, the more of the block material will be intermingled with the cement.

Q. Will there be any difference in penetration as a result of the agitation? A. None.

Q. What do you understand by the term "penetration" of the pores of the block, as the language of the patent reads?

A. Penetration, in my opinion, would be the cement passing into voids, using that in the absolutely general sense, covering all voids, measurable or immeasurable, in which the void was in diameter less than the diameter of the cement particle. It is perfectly apparent that any void that is less in diameter than the cement particle, will hold the cement particle there, it being a solid just the same as every filter we work with operates.

Q. What do you understand to be the reason for

(Testimony of Ralph K. Strong.)

the lack of penetration of the cement mixture into the block?

A. There isn't a void large enough to take care of the cement particles.

Q. What is the nature of the mixture of cement and water chemically considered?

A. Chemically considered, it is a suspension, solid cement [151—93] and liquid water.

Q. What do you mean?

A. I use suspension in the technical sense.

Q. Is it solution?

A. It is not solution. Cement is insoluble in water.

Q. What is the distinction of a solution from a mixture?

A. A mixture would cover any two substances intermingled, no matter how many phases. A solution is one phase; every part, every section of the solution is homogeneous. It is a homogeneous mixture, as we ordinarily begin to define it.

Q. Is there homogeneity in the mixture as distinguished from a solution?

A. No, indeed, it is not necessary, although a solution is a mixture. Homogeneity is not a characteristic of a mixture.

Q. What is the effect of the application of water to a particle of cement considered as a single object of thought?

A. There has been great difference of opinion as to the mechanism of the reaction. There is a crystalline theory of setting, and there is the colloidal

(Testimony of Ralph K. Strong.)

theory of setting, and all conversions and variations that have to do with those two main theories. I might say that the colloidal theory is a somewhat recent one, and if I may quote from Desch there verbatim, or have it covered in the record, it seems to me it might be helpful in explaining the mechanism. Desch on the Chemistry and Testing of Cement.

Mr. RANKIN.—The date of that, please.

A. 1911.

Mr. RANKIN.—What edition, or is there only the one edition?

A. It is not so stated. "The action of lime on silica in the presence of water leads to the formation of a gelatinous mass, in which both lime and silica are present."

Mr. RANKIN.—Since the date of the book is 1911, and the patent was issued in February, 1911, it is certainly not [152—94] a publication that could precede within two years the issue of this patent.

Mr. ATKINS.—It is not offered as a publication.

Mr. RANKIN.—I think that is correct, and I withdraw the objection.

A. (Continuing.) In which both lime and silica are present, but for which it is impossible to obtain a definite formula, the composition varying with the conditions of the experiment. A hydrated calcium metasilicate, containing an uncertain amount of water, has been obtained by several investigators, but the formation of crystalline substances of this kind is always a secondary change, the original precipitate being invariably gelatinous." * * *

(Testimony of Ralph K. Strong.)

"Since the absorption of water by a colloidal mass to form a gel is accompanied by a great increase in the volume of the mass, as is familiarly seen in the swelling of gelatine or starch grains, it has been questioned whether a colloid theory is applicable to cements, which are known not to increase largely in volume during setting. The objection is really based on a misunderstanding, whilst the individual particles of cement become larger, the total volume of cement plus water diminishes during the absorption as is always the case when colloidal gels swell by absorption of water."

Q. Who is this writer from whom you have quoted?

A. The authority of that theory is Michaelis, propounded in 1893, according to Desch.

Q. Is the theory of the colloidal formation of cement by application of water correct in your opinion or not?

A. It is the best in my opinion offered, and in support of my opinion I would state this: That cement which has been set can be reground, and can then be set again. It can be reground [153—95] and set again. And the explanation is that the action is superficial on the outside of each particle. And when that superficial layer, this colloidal gel, which does not demand it be in liquid or plastic state—the gel may be the original gel—has been removed, there is still cement available for a new set.

Q. What would be the effect in respect to pene-

(Testimony of Ralph K. Strong.)

tration of a block of cement in suspension in water in consequence of this colloidal theory?

A. Well, just as soon as the setting begun, the particles of cement will go in not as far as it would when it was fresh.

Q. The formation of the colloid would then act as an additional means of excluding the intrusion of the cement into the pores. Is that correct?

A. Exactly.

Q. And in your opinion without the colloidal formation the cement would not penetrate the pores?

A. With or without it would not penetrate through a pore greater in diameter than I have defined previously.

Q. Is it correctly stated in the patent that the water will lead the cement downward into the pores? A. In my opinion it will not.

Q. Why do you so state?

A. In the process of filtering it is well known that a filter medium may be used to separate solid particles from suspension which are smaller even than the voids. That is, it would go through the voids. To illustrate: Now, a common practice is to filter and let the first part go through clouded and then put it back in the original container, and keep on and very shortly after you have carried that on, a liquid comes through clear. It seems as if the particles of solid which are to be [154—96] taken up pile up and interfere with each other on the filter, and themselves act as a filtering medium.

(Testimony of Ralph K. Strong.)

Q. If I understand you correctly then the block, the cement block of the patent acts as a filter to the cement in suspension in the liquid. Is that correct?

A. In so far as there is a flow of water through the brick, or into the brick, it acts as a filter.

Q. It allows the passage of water and interrupts the passage of cement into the pores? A. Yes.

Q. You saw the operation of the so-called Shope method at the Shope plant on May 14 of this year?

A. I visited the Shope plant, and I believe that was the day.

Q. In your opinion, was there any exception to the theory which you have expressed that the block acts as a filter to the cement in suspension in water?

A. I had no difficulty in verifying the theory in my opinion on the examination of that Shope brick.

Q. What effects the facing of the Shope brick? Is it adhesion, or is it in consequence of the infiltration of the cement mixture into the block?

A. Do I understand the question to be the adhesion of the surface and body of the brick?

Q. The adhesion of the coating to the block.

A. There is a continuous layer of cement, continuous not absolutely, but you can follow the cement around by the particles of sand which are in the upper layer. The cement of the upper part adjoins the cement of the lower, intermingled by the aggregate.

(Testimony of Ralph K. Strong.)

Q. Do you recognize that brick, that particular brick? A. I believe I do. [155—97]

Q. What is it?

A. It is a brick made, I should judge by the cross-section here by the Peterson Ward process.

Q. In the Shope brick is there a difference in thickness of the layers of the different faces?

A. There is. The outer face may be traced further down into the brick.

COURT.—In the Shope brick, you mean?

A. Yes, in the Shope brick.

Q. How do you account for that?

A. Account for that by mixing which the Shope people do on the block.

Q. What do you mean by mixing?

A. Agitation.

Q. Is it the mixture that increases the apparent thickness there?

A. It is stirring up of the block and of the cement which is put on for a finish.

Q. It is not then evidence of penetration?

A. Absolutely not, in my opinion.

Q. That increased thickness is caused from agitation? A. Intermingling.

Q. From intermingling of the loose sand from the green brick? A. Yes.

Q. With the cement mixture of the coating?

A. I believe that is it.

Q. What led you to that opinion, as far as your observation went?

A. I don't think I can answer that.

(Testimony of Ralph K. Strong.)

Q. You saw the Shope brick manufactured?

A. I did.

Q. You say that you think that the difference in the thickness is the result of the mixing up of the sand into the cement coating? [156—98]

A. I do.

Q. Now, how do you arrive at that conclusion from what you saw in the operation?

A. I saw them operating with considerable vigor.

Q. In what way?

A. I think that I would rather do it this way, if the Court is agreeable. With two bricks certified to be Ward & Peterson and Shope, I could show that if I had the two fractures to compare them, as I have no marks of identification on any of the bricks.

Q. Then you can't identify that?

A. I was careful to state that.

Q. Yes, I observed that.

COURT.—I think we should identify the bricks if they are to be used.

A. This can best be done by the men themselves.

COURT.—By the people who made them?

Mr. ATKINS.—Can we call Mr. Ward to identify the brick?

COURT.—I suppose counsel will take your word for it, if you state where they came from.

Mr. ATKINS.—Will you stipulate?

Mr. RANKIN.—If you say Ward & Peterson made that brick.

(Testimony of Ralph K. Strong.)

A. I want to see the two side by side.

Mr. ATKINS.—I say this is a Shope brick, and this is a Ward & Peterson brick.

Mr. SHOPE.—Yes, we will admit it.

Bricks offered in evidence. Shope brick marked Defendants' Exhibit "X" Ward & Peterson brick marked Defendants' Exhibit "Y."

Q. Now, you see the marks there and you compare them and state what differences, if any, you find. [157—99]

A. Particles of sand are imbedded in the layer of cement, which is differentiated by the color in both cases. The particles of sand as they appear in the cement layer are completely covered by cement in both these cases, and the difference in depth of this upper treated layer in the cement in my opinion is simply due to the mixing up of the surface, that is, the top.

COURT.—That is the Shope brick?

A. That is the Shope, or X. This is the other, and after it goes down further, the colored part of this brick is simply due to the stirring up they give it, much more vigorous stirring than in the manufacture of this brick.

Q. Is there identity or difference, in your opinion, between the process you observed in the Shope Brick Company plant and that practiced in the Ward—Peterson?

A. As I observed the manufacture in both cases, the Shope surface was agitated a great deal more. In fact, I didn't observe any agitation in the case of the Ward—Peterson brick at all.

(Testimony of Ralph K. Strong.)

Q. Did there appear to be any agitation, as far as you observed, in the application of Ward—Peterson?

A. Of necessity must have been in trowelling back and forth, the movement of the particles one upon another, and must have been some mixing.

COURT.—I suppose, Professor, you mean in plain English that one was rubbed more than the other? A. Yes.

Q. And the laying on of the coating, the surface coating in the Ward—Peterson brick was gently applied?

A. More gently applied than in the case of the Shope?

Q. Did you notice in the Shope Brick Company what kind of a trowel was used? [158—100]

A. It was a float, and I believe a wooden float, although I didn't feel of it. It seemed to me I asked one of the workmen, but I couldn't swear that I did.

Q. What trowel was used in the Ward—Peterson? A. It was a steel trowel, thin faced.

Q. You think they were distinguished in that particular?

A. Yes, I would. The float was of the order of an inch in thickness, and were about the same superficial area.

Mr. ATKINS.—You may cross-examine.

Mr. RANKIN.—I would like until to-morrow morning to take up the cross-examination. Have

(Testimony of Ralph K. Strong.)
you introduced all the patents that are cited in the answer?

Mr. ATKINS.—I think so. I want to be sure. I intended to do so, and will compare them to-morrow morning, and be sure they are all right.

Mr. RANKIN.—There are two things. The patents have been put in, I suppose, subject to argument, although no testimony on them. I want to be able to get that testimony from the expert that we have for that purpose. Second, we have made several experiments. We want to introduce our brick that have resulted from these experiments. I also offer at this time—it was discussed informally by counsel and myself some time ago—that it would be a very great assistance to the Court, if the Court could take a trip over to the plant, and see it actually done, and I would offer it, and be willing to do it.

COURT.—I don't know whether I could promise that or not.

Whereupon proceedings herein were adjourned until to-morrow morning at 9:30. [159—101]

Wednesday, May 28, 1924, 9:30 A. M.

RALPH K. STRONG resumes the stand.

Cross-examination.

(Questions by Mr. RANKIN.)

Mr. Strong, you have read the specifications of the patentee in the patent in suit? A. I have.

Q. Do you find anywhere in those specifications that the patent mentions brick made solely of sand?

(Testimony of Ralph K. Strong.)

A. No, sir; I do not.

Q. As I understand it, we don't quarrel with whether the patentee has said this or that, but we may have a difference of opinion as to the interpretation of what the patentee says.

A. The experiment with sand was simply stated to be an experiment of the condition according to the specifications of the patent.

Q. Possibly you didn't hear my question. I said we have no quarrel with whether or not the patentee said this or that in his patent, but we may have a difference of opinion as to how that language should be construed. A. I presume so.

Q. Now, this patentee of mine—and I wish to use his exact language, says: "The block when formed and cured, is a porous body with interstices, voids or pores between the particles of sand and cement, to which mortar will adhere in wall construction but which must be waterproofed on its exposed face to prevent the absorption of moisture." Now, this contemplates and in fact produces, if made according to these terms, a surface which will have some voids, will it not?

A. Being made of solid particles completely, there must be some voids, of course. It would be impossible to pack solid particles so there wouldn't be voids. [160—102]

Q. Then you admit there would be some voids?

A. Certainly.

Q. Now, then, when we mix water and cement

(Testimony of Ralph K. Strong.)

upon the face—and I will call it for want of a better term, milk of cement. A. All right.

Q. Would there not be particles of cement small enough that some of them would enter the voids in the block?

A. I tried to make it perfectly clear. If the void is larger in diameter than the particles of cement is in diameter, of course it will fall in. It couldn't do otherwise. A matter of common knowledge.

Q. Then they would enter if smaller?

A. They enter the interstices if the void is larger in diameter than the particle of cement.

Q. Now the questions which you have so kindly answered me are within the language of the patent, are they not?

A. Not in my interpretation. A void—

Q. That is really for the interpretation of the Court, is it not?

A. You asked me for my opinion.

Q. Those questions that you have answered now are well within the language used by the patentee in his patent?

A. I believe not. Entering the pores, if he speaks of particles entering the pores which are open between the particles, as of sand or any mixture, it is apparent to any scientist that they would go there. It must mean, I should say then, as an expert, viewed from the chemical side, that it went further than that.

Q. What does this patent say?

(Testimony of Ralph K. Strong.)

A. Entering the pores.

Q. Then the answers to the questions are well within that language, are they not? [161—103]

A. That I should say, using your own language, would be for the Court to decide.

Witness excused.

Defense rests.

Mr. RANKIN.—Now, if the Court please, with the courtesy of counsel, we have here certain brick, they are numbered A, B, C, D and E. In order to expedite matters counsel has agreed to take my word for it, and I do state to the Court that these are manufactured on Shope brick machines, at the Shope plant, in the usual forms and usual methods that Shope brick are manufactured, and are Shope brick manufactured under Claim 2, with the exception that exhibits "D" and "E" each conform to my statements in all particulars except that the material which is used is a charcoal substance, for the purpose of illustration, and is not the usual material that is used in their blocks.

Mr. ATKINS.—I want it understood these are made in accordance with the terms of the patent as well as in accordance with Shope bricks.

Mr. RANKIN.—Yes, they are.

Exhibits offered in evidence and marked Plaintiff's Exhibits 11–A, 11–B, 11–C, 11–D, and 11–E.

Mr. RANKIN.—And further, as having no bearing on the case further than showing the Shope art, here are six bricks manufactured under the Shope patent and the Shope process, and really Shope

(Testimony of Ernest E. Werner.)

brick, commercially. We offer them as one exhibit.

Marked Plaintiff's Exhibit 12. [162—104]

Mr. RANKIN.—Further, by agreement of counsel, some of the patents that are in evidence will be eliminated for the sake of brevity, and if Mr. Atkins will kindly give me the patents upon which he relies, I will introduce my witness.

Mr. ATKINS.—I am not eliminating any, but will give you a list upon which we will probably rely exclusively. [163—105]

TESTIMONY OF ERNEST E. WERNER, FOR PLAINTIFF (IN REBUTTAL).

ERNEST E. WERNER, a witness called on behalf of the plaintiff, in rebuttal, being first duly sworn, testified as follows:

Direct Examination.

(Questions by Mr. RANKIN.)

Where do you reside, Mr. Werner?

A. St. Louis, Missouri.

Q. What is your business?

A. I am a consulting engineer, offices 37 South Vanderverter.

Q. What have you done to qualify yourself in your profession?

A. I have had several semesters—

Mr. ATKINS.—I admit the qualifications of the gentleman as an expert.

Q. Mr. Werner, I call your attention to the patent in suit of Mr. Shope, No. 985,709, and ask you if you have read the same? A. I have.

(Testimony of Ernest E. Werner.)

Q. I will ask you what in your opinion or your interpretation is the base of this patent.

A. The patentee describes it both in the claim and in the statement as a method of forming waterproof faced cement blocks.

Q. Does the patentee give directions comprehensively as to his intent? A. Yes, quite clearly.

Q. State as clearly and briefly as possible what these directions are, preferably separating that which is admittedly old from that which is claimed as new, having reference to the specifications, of course.

A. All that is necessary for the interpretation of this patent from my standpoint, of course, is contained in the first [164—106] paragraph of the second claim, page 1. The first sentence clearly speaks of something which is old, something which he does not claim except as an element in his patent, that is a semi-dry body upon which he wishes to place the facing. Shall I use the language of the patent or may I use my own—which do you prefer?

Q. As you prefer.

A. He says, "Water is next applied, as by sprinkling, to the face of the block in sufficient quantity to enter the pores or interstices of the block, and then a powder of cement, either neat or mixed with sand or other ingredients, is sifted upon the water." Claim 1 substantiates this description to this point. He then adds: "Which is at the same time agitated so as thoroughly to saturate the face of the block." The "same time" is rather

(Testimony of Ernest E. Werner.)

important. Now that clearly defines to me what he wishes to do. He now goes on to explain what will happen. "The water will thus enter the pores or voids of the block to the required depth, and carry with it the cement powder sifted thereon." That is purely an explanation. Then also "The water serves both to carry the cement into the pores and to cause crystallization of the added cement, and no external pressure will be required to force the water and cement into the block." That concludes his statement. The rest of the sentence merely expresses that he may thereafter do what he pleases, which presumably is his right. That, your Honor, in my opinion is the substance.

Q. We have had some testimony as to how cement and water act or interact in regard to colloids. In your opinion does this matter for the purpose of this patent?

A. Not everyone accepts the theory of colloids as applied to the cement industry, the utility of cement; this theory is being [165—107] more and more adopted, although still considerable controversy exists. I would say it enters to this extent; it throws considerable light upon the statement made by the patentee, as to carrying cement into the voids, I would rather think on the earlier steps of the formation of the ultimate colloidal gel. These earlier steps being merely the suspension of the cement in water, similar to what Dr. Strong referred to in his mud puddle. Cement is very much the same substance physically as clay. Further-

(Testimony of Ernest E. Werner.)

more, the standard cement is of varying fineness; I am speaking from memory, although I have little literature to verify it, your Honor. Twenty-five per cent of the ordinary cement will float upon a 200-mesh sieve. I believe there are standard Government specifications and I am rather referring to this than to scientific discussions on the subject. Also 25% of the particles will be finer than two ten thousandths of an inch. Now that is well within the borderland of suspension, such suspension as the doctor referred to in regard to mud. It does not take much imagination to visualize that when one takes a quantity of cement and a quantity of water—I think we can even fix the quantity—if one takes a large quantity of water and a small quantity of cement, one could use in part a colloidal suspension which will pass through a filter; I can see no difficulty why it should not enter the superficiary pores. Now, when one approaches this from the standpoint of the patent, this is dealing with indefinite quantities. The patentee says "sufficient" sufficient to enter the interstices or pores. One might reason this—rather let me put it this way; I would reason this way: That part of the cement, that part which enters—may I use his language—"some of the cement" will doubtless be put into this condition of suspension and thereby enter the pores. Dr. Strong spoke very correctly of the latter stages of the setting of [166—108] cement. Later on, this hypothesis may apply, this imaginary condition of gelation, a plastic colloidal gel be

(Testimony of Ernest E. Werner.)

formed, but we cannot reach that condition, if your Honor pleases, without getting preliminary our condition of suspension which functions for the patentee.

Q. You spoke in your answer of Dr. Strong's testimony. Do you agree to what the Professor said?

A. Not altogether. You mean yesterday or today?

Q. This morning.

A. Yes, quite. There is nothing between us at all.

Q. Now the patentee speaks of his porous body, one which is common in the art, which you have defined. What do you say as to the probability of ordinary commercial cement entering the voids?

A. I have answered that before. I believe, according to standard authorities, of commercial cement, twenty-five per cent will be finer at least than three ten thousandths of an inch, and of course as to the probability of having voids, the bricks will speak for themselves.

Q. Mr. Werner, you have been in the courtroom throughout the trial? A. I have, sir.

Q. And have heard the testimony of the defendant on the lack of infringement, as well as the witness Bilyeu's testimony upon the infringement? Would you say that this discloses a process substantially the same as that defined in the patentee's process?

Mr. ATKINS.—I object to that question as in-

(Testimony of Ernest E. Werner.)

competent. That is a question of law as to infringement.

COURT.—He can answer the question.

A. It is my impression, my mental impression, that the essence of this testimony was that these gentlemen—I have forgotten [167—109] the name—differed from the specific description of this patent to this extent: They applied what is technically known, or rather in the parlance of the trade, as slurry; this slurry is placed upon the face of the brick by means of a trowel and thereafter a brush was used which had been repeatedly dipped into water. The quantity of water was not stated. If one bears in mind what I have said before in regard to these minute small particles which at the early stage of formation are not jelly like, but can be readily dispersed, as cement slurries can be, and then say that if these defendants use a material quantity of water, not necessarily a large quantity, but material, this slurry will function to give up some of these small particles to now function according to the patentee, in other words, wash out sufficient of the cement, merely suspended cement, to enter the pores, the question to me is simply this: How much water do they use to do that?

Q. Mr. Werner, I present you with patent of C. W. Stevens, No. 624,563, dated May 9, 1899, and identified as Defendants' Exhibit "A."

A. Could I not facilitate matters: I have mine in the sequence of the amended answer. It would save an enormous amount of time.

(Testimony of Ernest E. Werner.)

Q. Mr. Werner, I call your attention to patent of William Wheeler Hubbell, dated May 30, 1871, No. 115,475. Have you read that patent?

A. I have.

Q. Does it have any bearing on the Shope patent? A. Not in my opinion.

Q. Would you kindly state the difference. This is [168—110] Defendants' Exhibit "D."

A. The patent is for a pavement. The patent says the surface shall be smooth, easy, gritty and pliant. Rather a difficult combination. It is just ordinary cement construction, and furthermore, this patentee uses chemical means for waterproofing.

Q. I call your attention to George Richardson's patent No. 461,890, dated October 27, 1891, marked Defendants' Exhibit "E," and ask you if you have read it? A. I have.

Q. And can you differentiate the same from the Shope patent?

A. You are speaking of the Richardson?

Q. Yes. A. Oh, most readily; yes.

Q. Will you please do so?

A. This patentee subjects his block while still in the mold, to a shaking motion to drive out air spaces and superfluous moisture. This mixture is allowed to set in the mold. In other words, no theory of removability there at all.

Q. I call your attention to Defendants' Exhibit "F." Thomas A. Good's patent, dated April 17, 1894, No. 518,239. Have you read that patent?

A. I have.

(Testimony of Ernest E. Werner.)

Q. In the same manner please differentiate that from the Shope.

A. This patentee, like Shope, forms a surface of pure cement, or indicates that he wishes to. He says his stone must remain in the mold for twenty-four hours prior to removal. That would not render itself to commercial mass production of brick.

Q. I call your attention to Defendants' Exhibit "G," being patent of Antonio Federici, No. 527,-416, dated October 16, 1894, and ask you if you have read it? A. Yes, part of it.

Q. Will you please differentiate that from the Shope patent [169—111] process defined in his patent?

A. This patent suggests the putting of large pebbles into a liquid mass of cement and allowing to harden the mass in the mold.

Q. I will call your attention to Defendants' Exhibit "H," patent of William J. Haddock, No. 531,842, dated Jan. 1, 1895, and ask you if you have read it? A. I have.

Q. Please differentiate it if possible from the Shope process defined in his patent.

A. The principal idea of this patent is to combine the use of an artificial and natural cement. It is for a block. The waterproofing is applied in a single layer, that is a stratum between the base and a layer superimposed upon the stratum, which the patentee speaks of as waterproof. In this case this patent as well as many others shows that the art made many efforts to produce waterproof brick.

(Testimony of Ernest E. Werner.)

Q. I call your attention to Defendants' Exhibit "I," patent of Johann Jungbluth, dated Aug. 3, 1897, No. 587,484, and ask you if you have read this? A. I have.

Q. Will you differentiate it from the Shope process?

A. This gentleman wishes to use a layer of pulverized asphalt at a seethingly hot temperature.

Q. I call your attention to Defendants' Exhibit "J," patent No. 624,563, of Charles W. Stevens, May 9, 1899, and will ask you if you have read it?

A. This is the adjudicated patent.

Q. The adjudicated patent, I mean. The one which counsel are emphasizing.

A. I don't think I can improve upon what the Court of Appeals said about this patent. I don't think it has much relation. [170—112]

Q. I call your attention to Defendants' Exhibit "K," of Frederick M. Emerson, dated Feb. 4, 1902, patent No. 692,644, and will ask you if you have read that. A. I have.

Q. What is the differentiation?

A. This is a veneer-faced block formed downward. There is no immediate removal from the mold indicated, and the patentee is under the impression that he can bind two layers or two varying layers of cement and water by tamping, forcing them mechanically together.

Q. I call your attention to Defendants' Exhibit "L," patent No. 703,644, dated July 1, 1902, of Edward Davies, and ask you if you have read it?

(Testimony of Ernest E. Werner.)

A. I have.

Q. Please differentiate it.

A. This is for fence posts.

Q. I call your attention to Defendants' Exhibit "M," patent No. 723,281, of William E. Jaques, dated March 24, 1903.

Mr. ATKINS.—You may omit that. We will not lay much stress on that.

Q. I call your attention to Defendants' Exhibit "N," William E. Jaques, No. 748,611, dated Jan. 5, 1904, and will ask you if you have read it.

Mr. ATKINS.—You may omit that also.

Mr. RANKIN.—Counsel stipulates it is out of the case.

Q. I will call your attention to Defendants' Exhibit "W," F. A. Malette, No. 751,089, dated Feb. 2, 1904, and ask you if you have read it. A. Yes.

Q. Will you kindly differentiate it from the Shope process as defined?

A. This man takes the larger portions of aggregate, covers them individually, in his language, with mortar. He puts them in a [171—113] mold and floats upon it the liquid cement. I don't think you could make bricks that way.

Q. I call your attention to Defendants' Exhibit "O," patent of Earl L. Brownson, No. 777,073, dated Dec. 13, 1904, and ask you if you have read the patent?

A. Yes. This patentee apparently endeavors to waterproof a stone by making a stone or casting a stone in two pieces, two sections, and later casting

(Testimony of Ernest E. Werner.)

in between them a waterproof layer to serve to bind the two parts of the stone together, and also to function as a waterproofing. In this case there is not even thought of a facing in the sense of Shope, or as occurs in the art frequently elsewhere.

Q. Mr. Werner, I call your attention to Defendants' Exhibit "P," from J. J. Cox, No. 814,358, dated March 6, 1906, and ask you if you can differentiate that patent from the Shope?

A. My notes say machinery only, and therefore of no interest. I may be mistaken, but that is my interpretation.

Q. I call your attention to Defendants' Exhibit "Q," No. 818,286, from W. Porten, dated April 17, 1906, and ask you if you can differentiate it from the patent in suit?

A. This man sifts cement into a mold made smooth. His thought is to get smoothness from the mold, to form a face; he now tamps the material with a coarse mixture. He evidently operates on the frequently occurring inverted principle, that is, he depends upon the moisture in the coarse mixture to force the water into the facing. He claims waterproofing, uses pressure, and by referring to page 2, line 10, implies immediate removal from the mold. I don't think it would be very feasible to make bricks that way. [172—114]

Q. I will call your attention to Defendants' Exhibit "R," No. 829,249, from George H. Bartlett, dated Aug. 21, 1906, and ask you if you can differentiate that from the patent in suit?

(Testimony of Ernest E. Werner.)

A. That is also a patent to make a smooth or ornamental face and also forms the block inverted. In other words, the facing is formed first, and the body superimposed. He uses a wet slurry which is put into a smooth mold, and then the slurry, the thin slurry, as he puts it, is then run downward, the mass is allowed to harden in the mold. It would seem that immediate removal of the brick manufactured is hardly possible.

Q. I call your attention to Defendants' Exhibit "S," No. 833,952, dated October 23, 1906, of G. Brown, and will ask you if it has any bearing on this case?

A. Again I may be mistaken, but I wrote on this as a machine patent only.

Q. I call your attention to Defendants' Exhibit "T," dated Apr. 16, 1907, being patent of Timothy W. McClenahan, No. 850,670, and ask you if it has any bearing on the process described in the Shope patent?

A. As I read this, this patentee states that he does not make a facing brick. He places a layer of sand upon a semi-dry aggregate, using this sand as a percolator. This seems rather the thought he has in mind—supplying water for crystallization.

Q. I call your attention to Defendants' Exhibit "U," No. 886,124, patent of John C. Henderson, dated April 28, 1908, and will ask you if you can differentiate that from the patent in suit?

A. Most readily.

Q. How?

(Testimony of Ernest E. Werner.)

A. He puts a semi-liquid mass into a nonporous mold and applies [173—115] a top surface dry Portland cement to absorb from said mass the excess of water. In other words he is operating per contra.

Q. I call your attention to Defendants' Exhibit "V," patent No. 958,194, Augustus O. Thomas, dated May 17, 1910. Can you differentiate this from the Shope patent?

A. On lines 55 to 65 this patentee says the following: "The addition of the powdered marble or other stone mixed with cement serves the immediate purpose"—I have no doubt it will be made clear—"the immediate purpose of forming a very thin outside layer on the face of high plasticity preventing, by a thickening or stiffening action, the surface tendency to run, due to the oozing of the water to the surface." In his claim, line 86 and on over to the end, he says: "in forming on the surface of said facing a thin layer in low plasticity by sifting on such surface powdered stone and cement to stiffen the surface of the facing and prevent the escape of moisture therefrom." Here is a man who clearly had the same intent Shope had. He however makes a three step operation, and consequently if one would operate Thomas, in view of the subsequent disclosure of Shope, one could produce doubtless a brick of Shope type. I don't think however that you could fairly read this patent as having had reference to Shope.

(Testimony of Ernest E. Werner.)

Q. Was this patent in the Patent Office at the same time the Shope patent was there?

A. Yes, it is curious that this patent was issued even ahead of the Shope, and that there seems to have been ample room for interference, but evidently the Patent Office considered Shope free of it.

Q. Mr. Werner, there has been some quibbling as to the result of [174—116] pressing or agitating, whether or not these functions are different. What do you say with respect to plaintiff and defendant doing the same thing in that regard?

A. The defendant doing what?

Q. Pressing or agitating.

A. Why, as I understand the thing—as I listened to the testimony as far as I could understand it, they were doing the same thing with this difference, that the contention was made that the float would function differently from a trowel, but in every other respect they must do the same thing, they can't help themselves.

Q. In your opinion, would there be any distinction between a float, or the result of agitating with a float which had a metal face, or a trowel?

A. Why no, assuming they both have the same physical condition of surface. There could be no difference.

Q. Would you call that process pressure or agitation?

A. The first operation, as practiced and used in my presence, I would call agitation, of course.

(Testimony of Ernest E. Werner.)

Q. Now, you had certain tests made at the Shope plant, didn't you? A. I did.

Q. I hand you a brick marked Plaintiff's Exhibit 11–A—and ask you if it was made under your direction. A. Yes, sir.

Q. And for what purpose? To illustrate what purpose?

A. Well, all my preliminary experiments were made in the laboratory and on a fairly extensive scale, but I did wish before I came into court to see whether or not the commercial operation coincided with what I had done in the laboratory, and with the patentee's description of his process.

Q. How was this brick, please?

A. Again, using roughly from memory patentee's description, [175—117] the semi-dry aggregate was mixed. May I, in reference to this disputed point, agitation and pressure, state the details? Six bricks were made simultaneously. There were six molds in bank. The upper surface of these molds, when in juxtaposition and ready to receive the aggregate formed a perfectly smooth surface over which either trowel or float or any other instrument which is wide enough to straddle it would of course float, in the full sense of the word, would not compress. Into this mold was placed the aggregate which was tamped and stricken off. On it was placed water and cement in the following fashion. The man would hold in one hand a sprinkling-can and in the other hand a can arranged to sprinkle or discharge a regulated quantity of cement and rapidly pass both over the mold. He would then

(Testimony of Ernest E. Werner.)

take this instrument which you have in your hand and use it. Now, as to whether or not, under those circumstances, there is much—some compression, one might quibble, but I would say that in view of the fact that the upper surface of the mold clearly restricts the downward motion or movement of the instrument used, one can call it, with perfect propriety, agitation.

Q. Now, was the brick, exhibit 11–A, made in that fashion?

A. Exactly in that fashion, and I had it made with the patent in view, reading to the workman each step, only separating it for him so that he would follow the thing.

Q. What did you find as to penetration, please?

A. I have illustrated that in a most drastic fashion. I can give you an opinion, but the brick will speak for itself.

Q. Was exhibit 11–B, that I now hand you, made in a similar way?

A. At the same time, under the same conditions, from the same [176—118] aggregate, with the same operation of sifting and application of water and cement, subsequently finishing with a trowel, smoothed.

Q. Was exhibit 11–C made in the same manner?

A. At the same time, from the same material, and in the same manner, and finished by the workman—I really don't know what he calls it, but it was with a trowel. Mr. Rankin, will you allow me to refer to my notes. I am quite sure—I speak from memory—you will not hold me to troweling or floating. We will not quarrel on it. Now, let

(Testimony of Ernest E. Werner.)

me see my notes. One cannot remember. This brick, 11–A, was stippled. In other words, it was finished with a brush, without the metal, or in the fashion which this client of yours finishes his brick. And the other two, my notes say that B was troweled and C was troweled, and something else, I don't know what they call that; bricks will speak for themselves.

Q. Did you make any test over and above the three exhibits you have before you? A. Yes.

Q. As to penetration?

A. Yes. If I may put it in my way: It occurred to me last night, after listening to Professor Strong, that his statement of no penetration was hardly in accord with experiments which I had made at my laboratory at St. Louis in similar fashion, and not knowing whether I had been mistaken at that time, I wanted to repeat it under commercial conditions. The experiment is hardly a fair one in this sense, that instead of using sand, as directed by the patentee, I substituted a ground coke. I am speaking fair in a commercial sense, for I cannot see that this patentee has said to me I cannot put this facing on ground coke if I wish to do it, if I formed a block from it. If your Honor pleases I would like to have this speak for [177—119] itself. I call it a slight penetration. May I have the exhibit broken now, if you please. I wish to break it in court.

Q. Break it in court. (Brick broken.)

A. May I call your Honor's attention to the fact that this brick was made last night?

(Testimony of Ernest E. Werner.)

Q. I hand you exhibit 11–B.

A. Could you oblige me by breaking the brick? (Brick broken.) May I pass this to his Honor?

Q. Do you find from your examination of it, Mr. Werner, penetration? A. Oh, unquestionably.

Q. I hand you exhibit 11–E, and ask you if it was made at the same time and under the same circumstances?

A. At the same time, under the same conditions, except that they put a fanciful finish on it, I don't know what they call it. Now this brick of course in course of time would harden very much.

Mr. RANKIN.—That is all.

Mr. ATKINS.—Mr. Rankin, you have no objection to breaking each of the exhibits?

Mr. RANKIN.—Not at all.

Mr. ATKINS.—Will you do so, so we may regard them as broken exhibits? (Bricks all broken.)

Cross-examination.

(Questions by Mr. ATKINS.)

Mr. Werner, referring to the patent in suit, of which you have a copy? A. Yes.

Q. I think you said, did you not, that this is a process limited to the making of any form of cement structure?

A. Now, Mr. Atkins, I can't answer that question. I can't interpret this patent, I can only give you my opinion. [178—120]

Q. I am induced to ask this question because you have talked about brick manufacture and have treated the patents relating to other manufactures somewhat contemptuously, if I may say so.

(Testimony of Ernest E. Werner.)

Q. If you please, I shall be very glad to answer any question you may ask, with the distinct understanding that it represents my opinion only, as I read the specifications and as I understand them.

Q. Will you refer to the last paragraph of the specifications of the Shope patent, and state what you understand from that to be the scope of the Shope alleged process?

A. This would make the scope of the alleged process, as you call it—I don't know why—it is a perfectly good patent.

Q. This also is opinion?

A. Well, no, on top of the document I find the name printed, "Patent." That paragraph practically removes the limit. This man wishes to put now his facing upon anything almost that can be made from cement.

Q. That is plain, is it not?

A. Yes, and clearly means to be put on any of them.

Q. It follows, of course, that this patent is not limited to the manufacture of a commercial brick, in any sense?

A. Mr. Atkins, my definition given to Mr. Rankin, if you please, was in the language of the patentee. That is his scope is forming a waterproof facing for any block. That is his own language. Now I don't know to what he limits that, I can't say.

Q. Will you refer to lines 55 to 58 of the specifications.

A. I have them. That is the first sentence of the paragraph.

(Testimony of Ernest E. Werner.)

Q. Yes. A. Yes.

Q. Which reads as follows: "In the present method the block is first formed in the usual manner by mixing sand and cement [179—121] in a slightly moist or semi-dry state and pressing or tamping it in a mould." A. Yes, sir.

Q. I think you have attempted to draw a distinction between a block that is made of sand and one made of some other aggregate.

A. I have tried to be fair, Mr. Atkins, in pointing out to the Court that it is in relation to the commercial manufacture. The experimental brick does not represent the aggregate of the patent but that is as far as I can go.

Q. Now, dismissing from your mind this question of commercial manufacture which you endeavor to stress, does not the patentee there say that he makes the block of sand and cement?

A. Yes, although there is also one place, line 17, where he says sand and cement.

Q. Now, what do you understand to be a process in patent parlance?

A. A sequence of operation tending to produce a result.

Q. Then this patent undertakes to teach a novel way of doing something in the art, does it not?

A. It must.

Q. Referring to Claim 1, please state whether you find in that claim a definite statement of sequence in any of the several steps of the operation.

A. Perhaps we can do it better if we read it together: "The herein described method of forming a waterproof faced cement block which consists"

(Testimony of Ernest E. Werner.)

—step one—"in first forming the block of suitable material in a semi-dry state, applying water to the face of the brick in sufficient quantity to enter the pores or interstices thereof." Step two—"Adding cement to the water whereby cement will enter the pores of interstices with the water." Whereby he will get the desired results.

Q. Is it your purpose to testify that the order or sequence is immaterial in this claim? [180—122]

A. This again is only my opinion. Inasmuch as the patent functions to carry cement into the interstices, I would say that as it concerns the invention, he clearly has as his object entering the pores of the block. Perhaps you will convince me to the contrary. That is my present opinion.

Q. I call your attention to the certified copy of the file-wrapper in the Shope case, Defendants' Exhibit "B." It appears in an amendment dated April 8, 1910—I may state parenthetically that I have numbered the pages of this exhibit in sequence, and that is page 12 of exhibit "B."

A. I have one here in which the action is dated on the part of the attorney April 8th. I prefer to use this one.

Q. I will ask you to state whether you are able to differentiate that claim from Claim 1 of the Shope patent.

A. May I have a copy of the Shope patent. Now —"The herein described method of forming a waterproof faced cement block"—which again is purely an identification mark—"which consists in first mixing cement and sand in a semi-dry state and molding it into a block, next covering the face

(Testimony of Ernest E. Werner.)

of the block with water and sifting dry cement upon it." Again, the third step—"Whereby the water will carry the added cement into the pores of the block without the application of external pressure." They are three identical steps leading to the same conclusion. Have I answered your question?

Q. Then there is no difference, in your opinion, between Claim 1 of the patent, and that claim which you have just read?

A. You might read the claim of the patent to me, so I may read this document. I want to be fair. [181—123]

Q. "The herein described method of forming a waterproof faced cement block, which consists in first forming the block of suitable material in a semi-dry state, applying water to the face of the block in a sufficient quantity to enter the pores or interstices and applying cement to the water; whereby the cement will enter the pores or interstices with the water."

A. Yes. In terms there is a distinct limitation of this patent now. In other words, this is now limited to sand and water. Is that the point you wish to make?

Q. Whatever you please, if you can draw a distinction.

A. That is the distinction as I see it. This first claim says in effect—

Q. Please identify when you say "This first claim."

A. Of the file-wrapper, the one removed from the patent. Well, now, Mr. Atkins, I would like to make a confession to you. You are far more skill-

(Testimony of Ernest E. Werner.)

ful than I in the interpretation of these patent claims. Why not ask me directly what the difference is and I shall try to be fair in answering. This way simply calls me to guard myself and my client. I simply must give exhaustive study before I answer. The other way you can get from me perfectly frankly what you wish.

Q. I wish to ascertain that frame of mind of yours in which you attempt to draw a distinction between what is old in the art and which purports to be stated to be novel in the claim.

A. I shall be delighted to give that. The art is as ancient as the pyramids, in its broad sense. An enormous amount of work has been done. Many men have endeavored to make blocks and most everything in creation out of cement. Some of them have attempted to make the very identical product, of course. There is no doubt you will find far more than I have been able to get indicative of a desire to do so, and many suggestions which [182—124] taken and assembled will give us the Shope theory. In my mind is this: I have been unable to find specifically either sequentially or otherwise, as I interpret, the thought of mixing—may I call *in situ*—I can't assist you here. In my mind this patent states—it is either that or nothing. I will make it very easy for you; mix *in situ*, that is what this patentee wishes to do. Whether he puts the water first or last or what he does, this is his invention as I see it. Now, I am quite open, is that fair?

Q. Perfectly fair and perfectly true, I think. Now comparing that Claim 1 from the file-wrapper,

(Testimony of Ernest E. Werner.)

with Claim 1 of the patent, will you state whether or not the only distinction is that in Claim 1 of the file-wrapper the block is limited to one made of sand and cement, and Claim 1 of the patent is differentiated by making the block of "suitable material." The question is clear to you, is it not?

A. Do I find in comparing these two claims any other difference? You haven't stated any difference in language and thought between them other than in the one case he may use suitable material and the other case, sand. Is that the thought in question? To do that I must be careful, I must study the thing for a moment. Now, perhaps this is what you wish, if so, I give it to you.

Q. I want your opinion. I don't want any more or less.

A. In one case he says "covering the face of the block with water and then sifting dry cement and sand in a semi-dry state, and molding it into a block, next covering the face of the block with water and then sifting dry cement thereon." And in the other case he says, "applying water to the face of the block in a sufficient quantity." Now, if you wish me to quote further, I shall be glad to do so.

Q. You do find, however, that differentiation I have mentioned? [183—125] That in the claim as allowed "a suitable material" is specified instead of cement and sand?

A. I believe I have said in direct and I am rather fair with you on cross-examination, what this patentee has described, and all of it he described, and more than all of it he described, since he puts in unnecessary things. I have also told you in very

(Testimony of Ernest E. Werner.)

plain language what my conception of the patent is. Now as to whether or not these terminological disputes between the Patent Office and the attorney here for the patent, it seems to me they are for his Honor, not for a technical expert, but I am quite willing to answer.

Q. Since it is a question the Court must pass upon, will you please be kind enough to answer the last question?

A. The last question: aside from the difference above mentioned, I now find an additional difference. The patentee, in his final claim, applies water to the face of the block in sufficient quantity, and in his file-wrapper claim he says—prior to the amendment and in no wise bound by it—"covering the face of the block," that is an additional difference. Are there any others?

Q. Is that all? Is that your answer?

A. So far. "With water and then sifting."

Q. You still—I am sure you do not intend to evade the question. A. Not at all.

Q. But you still fail to state that there is that distinction or differentiation between these two claims by the substitution in the claim of the patent, "suitable material" for sand and cement.

A. I have granted that, if you please, as one difference. Now, the next difference is that he now wishes to add "sufficient water." In the first instance he wished to cover the face of [184—126] the block. That is true. Now, if there are any more I shall answer.

Q. There is a substantial difference between the claim of the patent and this claim of the file-wrap-

(Testimony of Ernest E. Werner.)

per that we are considering in respect to the formation of the block, is there not?

A. There is not the slightest difference in the intent of the patent. There is considerable difference in the form of the claim.

Q. It is your opinion that there is no difference in the scope of the patent or the scope of the invention?

A. Again I cannot pass on that, but I will make it clear to you as best I can. It is purely a matter of interpretation, and of course I am interpreting it to the best of my ability for my client. When he says, "next covering the face of the block with water," is he in fact doing anything else but a step in his operation?

Q. I am talking about the block and not about the water. I concede that the application of water is substantially the same, I make no point upon that. As to the block I say there is a difference between "suitable material" and "sand and cement."

A. Now again we are at a disagreement. My conception of this patent is a facing.

COURT.—Isn't the difference in these two claims perfectly plain by the language in it?

Mr. ATKINS.—That is sufficient, your Honor, I will not press that further.

Q. Now, that Claim 1 of the file-wrapper has been erased. A. Evidently.

Q. And it was erased in view of this rejection, quoting from the file-wrapper, letted dated April 19, 1910? [185—127]

A. The next official in sequence.

(Testimony of Ernest E. Werner.)

Q. You have it?

A. "Claim 1 covers nothing beyond the ordinary process of laying cement sidewalks when the surface of the pavement is coated in whole or in part with water brought to the surface by tamping. It is accordingly rejected upon Haddock." May I say that as I read this it is a fair and honest opinion of the particular examiner who rejected it. I know nothing about it.

Q. But you are perfectly familiar with the patent practice?

A. Perfectly familiar to know that when there is a question of interpretation as it here exists, that must be decided in court, and that opinion is better than mine.

Q. And you know that when that claim was erased upon that rejection it was a confession that the invention as defined in that claim, was old in the art?

A. In the opinion of the particular examiner who made the particular rejection.

Q. And conceded by the erasure on the part of the applicant?

A. Why, if you wish to put it that way, it was conceded by the attorney representing the client. He was of the opinion that the examiner's opinion was good enough on it. In other words it would go. I know nothing about the attorney or the examiner.

Q. That, if you please, brings us to an examination of the Haddock patent, No. 531,842, Defendants' Exhibit "H," to which you have referred in your direct examination. Before entering upon

(Testimony of Ernest E. Werner.)

consideration of that patent I will ask you to state whether or not you are fully cognizant of the fact that the use of cement neat, as it is called, or a mixture of cement and water, constitutes a more or less waterproof coating, or waterproof layer, which is a coating or may be a coating? [186—128] A. More or less, I take it.

Q. But it is recognized in the art?

A. Old in the art.

Q. And that is the only waterproofing that the patentee in this suit, Mr. Shope, is attempting to secure?

A. You are speaking of waterproofing now, are you not?

Q. Water and cement.

A. When you say what this patentee wishes to secure you are speaking now of the waterproofing?

Q. I am speaking of waterproof coating.

A. Yes, I agree.

Q. Now, if you will refer to the Haddock patent.

A. Perhaps we can, with great deference—let us see whether we are apart. You have accused me of unfairness.

Q. I disclaim anything of that sort.

A. Let's see whether we are apart. We can save an enormous amount of time. I find in the Haddock patent, to put it very plainly, almost everything which Shope wishes to make, but I don't find anywheres a clear and concise and specific statement such as he makes, that if you mix on the top of your brick you will get a result. With this statement please proceed, because I merely want to help you see how much there is between us.

(Testimony of Ernest E. Werner.)

Q. Now, regarding this invention in suit, as a process or method of doing a certain thing, don't you find that process shown in the Haddock?

A. Not to my mental limitation; no, sir.

Q. May I ask you then to consider just what Haddock shows, and state whether layer B is not substantially the brick or the block which Shope uses?

A. Well, now, must I answer that yes or no? [187—129]

Q. I have no objections to how you answer it, so you answer it.

A. I think I said this morning Layer B is intended to be a waterproofing stratum in which he superimposes—shall we call it the facing, if you please—for the element D. Does that answer your question?

Q. No, it doesn't answer what I want to get.

A. Please repeat your question.

Q. I will ask you another question. Haddock, in the sentence beginning on line 76 of the specifications, says: "I employ the term 'moist' and wish it understood as designating a damp condition rather than a condition approximating a fluid or a wet condition. The mass so treated is then thoroughly tamped—"

A. Just a moment. I wish to take that up. I am unable to find—go ahead.

Q. "The mass so treated is then thoroughly tamped and compressed, the 'moist' condition of the mass preventing the water from oozing out as would be the case were the mixture over-saturated with water."

(Testimony of Ernest E. Werner.)

A. That is the patentee's language.

Q. That is just exactly what Shope does in his patent, is it not, in making his block?

A. What part of Shope's are you referring to?

Q. I am referring to the Shope block. Is not the process of forming a Shope block—and that is the term used in the patent—in this claim?

A. Yes, but I have already said to you that we have more: He adds to what he says there. I can't read him that way. I am reading him as facing on a block, and he says to me this block is old, and I don't care a picayune for it. [188—130]

Q. Have you any objection to answering the question as it is, please? (Question read.)

A. I do not.

Q. What is your answer?

A. I do not think so.

Q. In what respect is this step different from the Shope step forming a semi-dry block in a mold?

A. I say again, I must be very stupid. Are you talking now of the total block, the Shope product of his invention or a part of his block that he builds on. Please define your premises.

Q. Shope in his first claim says that his process consists of first forming a block of suitable material in a semi-dry state. A. Yes.

Q. Now, is that step anticipated in Haddock as I have quoted it to you?

A. Most certainly, and elsewhere.

Q. Just let us confine ourselves to Haddock. It is there in Haddock, is it not? A. Yes.

(Testimony of Ernest E. Werner.)

Q. Haddock continues "I then moisten this coating. The amount of material used in this step is sufficient to form a complete coating or covering and constitutes a stratum impervious to water."

A. Correct.

Q. Is that not the second step of the Shope patent?

A. May I say to you that the second step of the Shope patent only tends to form a coat making it impervious to water.

Q. I will put it this way, for your pleasure.

A. Oh no, I just want to be fair.

Q. The second step of the Shope patent is the application of water and cement, first sprinkling with water the block which he has formed. Now, is there any difference between that step [189—131] and the step which I have just quoted you from Haddock?

A. Is there any difference, if I understand the question, between one or the other means of sifting —sprinkling water on top of the block? Not the slightest. They both mean the same thing.

Q. Then had this Haddock method been interrupted at that point he would have had a Shope brick, wouldn't he? A. No, not by any means.

Q. Why not?

A. Well, Shope goes on further and you will no doubt lead me to that in a moment.

Q. What did he go on further and do?

A. First of all, Shope did something more. He gave me some instructions as to how much water I

(Testimony of Ernest E. Werner.)

should use—sufficient for his purpose. Next he sifted cement on it. That answers your question. That is Shope. I merely want to qualify that.

Q. Is not the whole Shope alleged process as defined in his Claim 1, shown in that part of the Haddock patents which we have been considering here?

A. To be fair, not to my mind.

Q. Not to your mind? A. No, sir.

Q. Will you object to stating how you differentiate the Haddock process from Shope?

A. I will be very glad to do so. I will give the mental process by which I arrive. Shope directs you to take a semi-dry aggregate tamping it into a mold. This becomes a matrix for further steps. Now he says sprinkle water on sufficient for his next step, sufficient to enter the interstices of the block whereby his next step will produce a result. Surely I can't read disjointed sections of this patentee whose ambition is similar [190—132] but whose method is different and stop at any one step. That is not in my mind.

Q. Haddock in Lines 91 and 92 says that after he has made this "I then moisten the coating."

A. Yes.

Q. Of course he moistens it to the degree to constitute a stratum impervious to water, as he goes on to say. A. Yes.

Q. Does Shope do any more or less than that?

A. Shope speaks intelligibly. You can take this Haddock patent or several other patents—I shall not help you with this—and practice them in the

(Testimony of Ernest E. Werner.)

light and sense of the Shope disclosure—may I call it the philosophy of his action—and you will get the Shope result, but I will not go so far as to say that any of the evidence patents—and there are quite a number of them—state this in any such fashion that I can go on making it without dissecting, without separating, without quibbling. That is only my point, nothing more.

Q. But all patents are addressed to one skilled in the art?

A. But skilled in the art does not mean one shall dissect out of something part of it. As I understand, it should be made so that one skilled in the art can read it and practice it but not anyone skilled in the art can take a portion of it and leave another portion of it off and do something. That is not my way. Perhaps his Honor will say—I have nothing to say. I am only trying to help.

Q. But Shope undertakes to teach to those engaged in this art a method of waterproofing cement blocks, does he not?

A. Call it teaching, if you please. He discloses it in the patent. I don't know. He says he will do that and he will get this result. [191—133]

Q. I won't indulge in discussing words, but that is what he is undertaking to do to tell the world he has made some improvement in the method of waterproofing cement blocks?

A. And I tell you, as far as my investigation goes, he did. I can see in the light of what he has told me that you can practice him without subtraction

(Testimony of Ernest E. Werner.)

or addition of certain matter from the language of other patents, and I have fairly tried in literature of the art, or in the patents, to find this simple statement in a simple fashion, to find the specific direction, but I have been unable; perhaps you are.

Q. No question of statement. It is a question of fact and knowledge that was communicated by Shope if it was communicated.

A. Mr. Atkins, in explicitly following the Shope instructions I get this result, that is as far as I can go.

Q. Perhaps you will admit this point, however, that if the application of a neat cement coating to porous bricks was new in Shope, as he assumed it to be, that it was also shown in Haddock?

A. I will not admit that. You are asking to admit in essence that the ham in a ham sandwich is the same as the bread. This man contemplates to make a three-layer structure, sandwiching a waterproof coating in there. I think he did. I grant he made it. I won't quarrel with you.

Q. If we were talking about a product that would be true, but we are talking about a process, and all Mr. Shope undertakes to communicate to the public in exchange for this patent was done by Haddock, was it not? A. That is your testimony, not mine.

Q. Do you contradict that?

A. I do not agree with it for one moment. [192—134]

Q. You say then that Haddock did not show the

(Testimony of Ernest E. Werner.)

application of a coat of wet cement to a semi-dry cement block?

A. I say to you that he may have done so in language. For all I care he has anticipated Shope. To my mind not even a suggestion of the clear language of Shope.

Q. And when you refer to your mind in that connection you refer to an unbiased highly technical mind, I take it?

A. I sincerely hope so, unbiased at least.

Q. I ask you now to refer to the Federici patent No. 527,416, Defendants' Exhibit "G," and ask you to state whether Figure 3 of the drawing in that patent, as described in the specifications, does not show a cement block D with plastic coating C upon it?

A. It shows in the cross section a block and it looks like a set of teeth, but I have to read the specifications. The question is what? What this figure alone conveys to me. Apparently it shows something of the sort, yes.

Q. How would you distinguish as you have undertaken to do, that disclosure from the Shope process alleged?

A. I find myself in this difficulty, that they don't resemble each other in thought or in conception. I may be at fault. Shope is for a patent to produce in a specific fashion a specific result. That is my comprehension of it. What is the claim in this? He says, "Into the surface of which pebbles of substantially uniform size are partially embedded."

(Testimony of Ernest E. Werner.)

The illustration shows he has not in mind any more than a building block. As I have said to you cement faced building blocks or even bricks are old except as made in a specific method. I think you ought to show that this is a method of Shope.

Q. I asked you to refer to line 29 of the Federici.

A. "A—represents stones and pebbles. B—the pebbles. C—a layer of pure cement." [193—135]

Q. C—a layer of pure cement? A. Yes, sir.

Q. That is a waterproof layer, is it not?

A. Yes, sir, in the sense that we discussed it.

Q. And it is applied to the block D below it?

A. Yes, upon the pebbles B.

Q. What?

A. It is upon the block below; the block below, B being formed here as shown. A represents what? The stone. B the pebbles. Both may be of cement.

Q. But that does show a cement block with pure cement coat C, does it? A. Block, yes.

Q. In what respect is that different from the Shope? A. As a finished block?

Q. I am speaking about process always, because that is the only thing in issue here.

A. This is for an article of manufacture, not a process in this patent. This is an article of manufacture.

Q. An article of manufacture must show a process.

A. All right. Let's go to the next step. This is his language. If I am to construe this as a process, he says, "While the material is yet plastic"—

(Testimony of Ernest E. Werner.)

COURT.—That is not the question.

A. Please, I will try to answer it.

COURT.—The question is whether it shows a cement layer, pure cement layer on the block.

A. It does, indeed it does.

Mr. ATKINS.—I feel disposed to apologize to the Court for taking so much time, but the question has been fairly raised and must be met unless the Court is satisfied upon this point. [194—136]

COURT.—Anyone can see by looking at that patent, or reading it, that it shows a layer of pure cement on the block.

Mr. ATKINS.—Yes, that is all I see in that. It appears to be necessary to refer to the Stevens Patent 624,563, for the reason that you have in your direct examination said you did not discover that that has anything to do with this case. (Defendants' Exhibit "A.")

A. Unless my memory serves me wrong, I merely said that I didn't disagree with the Court of Appeals.

Q. I think we may dismiss it with that explanation. Will you now refer to Patent No. 703,644, of Davies, Defendants' Exhibit "L," and state whether that does not show a block made of semi-dry cement subjected to a coating of waterproofing cement mixture.

A. The specification itself does not show that. I have dismissed it in my notes as for cement posts hardened in the mold. I mean left in the mold to harden. He fills mold 1, "which may be of any pre-

(Testimony of Ernest E. Werner.)

ferred shape, with a mass of damp sand, gravel and cement, mixed in suitable proportions" to produce the best results, and this composition is pounded into the mold "to cause a close adherence of the molecules of the composition, the sides 2 of the mold being closed up as shown in figure 1 etc." "To present the proper openings or holes through which the wires are passed for securing the fence wires in position, etc." I think he does all you claim, except no indication in my mind to Shope or method. I said everything else of the Shope brick but his method.

Q. The Shope process is shown there, it it not?

A. Not in my mind. Where is the instance?

Q. May I ask you to refer to the sentence beginning with line 75, page 1 of specifications? [195—137]

A. "When the composition has become sufficiently set to permit of the posts being handled without danger of breaking and before it has become finally set—" but he says when it has become sufficiently set. He is waiting for this—"the sides of the mold are let down and the post is removed from the mold and dipped into a bath of pure liquid Portland cement of such fluidity as that it will run smoothly and evenly over the entire exposed surfaces of the post, and fill all cracks, crevices and interstices except the openings left by the bars." We are in perfect accord. This man speaks of interstices and bars, and wishes to dip his brick into a liquid bath of cement. That is quite true.

(Testimony of Ernest E. Werner.)

Q. Is there any difference between subjecting it by dipping and by mixing the cement *in situ,* if you will pardon my method of pronounciation of Latin?

A. No copyright on pronounciation or phrase. A decided difference, and surely you will not ask me as a mechanic, or as an engineer, or as a mere scientist, to tell you there is not; but whether or not there is a difference I couldn't follow this on the face of it as a brickmaker, and make the Shope brick. Now, I can't read it that way with great deference.

Q. Do you mean to say that you would not get—by dipping you would not get all the Shope brick gets?

A. You would get exactly the same result Shope does provided you dip intelligently. What I want to say is this, you get exactly Shope results by dipping. May I again say, although you have resented it, that method would hardly render itself for commercial production in masses of brick. I really feel I must draw the Court's attention to that.

Q. I am of course endeavoring to give all the information I can. [196—138]

A. We are in perfect accord, that by dipping Davies' brick after it has set, as described here, in a liquid bath cement, the cement would enter the interstices and you would get the Shope result by entirely different and in my very humble opinion some foolish steps.

Q. Again I ask you to refer to this Davies' patent, page 2, line 4, and will ask you what this means.

(Testimony of Ernest E. Werner.)

A. "Heretofore fence posts have been given a surface coating by applying the surfacing material by means of a brush." Am I to interpret what that means, or shall I read it?

Q. I asked what it means.

A. "This is a laborious operation requiring considerable time and resulting in an unequal and unsatisfactory surfacing of the posts. In view of this disadvantage it is the essential object of my invention to secure a uniform protective surfacing." There is nothing between us. I have said you will not get your coat or a perfect finish. The patent concludes, "by dipping the posts," or, reading it your way, "by dipping the brick in a bath of liquid cement, which operation may be quickly carried out, and results in a uniform coating." I perfectly agree with him and still say he is foolish.

Q. That Davies' patent was applied for in 1901? A. That is so.

Q. And the last quotation referred to is a plain statement that it was old in the art to rub upon the posts a coating of pure cement?

A. Well, it was known to smear liquid masses over anything that you wished to cover with them.

Q. And that is exactly what Shope does?

A. That is for his Honor to decide.

Q. Is it not? Does he do anything else? [197—139]

A. He gives you a perfectly clear, sound theory. He says, do certain definite things and you will get a certain definite result. That is what he says, to my mind.

(Testimony of Ernest E. Werner.)

Q. And Davies did that in 1901, didn't he?

A. Exactly. He says to take your bricks and dip them in a liquid bath of cement, and he does that in clear and concise language.

Q. And he says it was then old to smear instead of dip? A. I can't testify it was.

Q. Does he not say that?

A. He does, his language speaks for itself.

Q. And that is what he says?

A. That is what he says. It is printed in the patent.

Mr. ATKINS.—I don't deem it necessary to go into this art further in detail. I think the Davies patent brings it clearly home that whatever Shope has done was done by Davies. I am not dismissing the other patents from consideration when the time comes, but I don't want to take the time of the Court to examine the witness on it, and I am not agreeing with his statement that he has made in regard to them.

A. We agree to ultimately disagree.

Witness excused.

Mr. RANKIN.—Counsel will stipulate for whatever it is worth that Shope does use both wood and metal face float.

Plaintiff rests.

Defense rests.

Approved as evidence in this case.

(Sgd.) R. S. BEAN,
Judge.

June 17, 1924. [198—140]

UNITED STATES PATENT OFFICE.

DAVID F. SHOPE, OF ST. PAUL, MINNESOTA.

METHOD OF WATERPROOFING CEMENT BLOCKS.

985,709. Specification of Letters Patent. Patented Feb. 28, 1911.

No Drawing. Application filed October 9, 1909. Serial No. 521,796.

To all whom it may concern:

Be it known that I, DAVID F. SHOPE, a citizen of the United States, residing at St. Paul, in the county of Ramsey and State of Minnesota, have invented certain new and useful Improvements in Methods of Waterproofing Cement Blocks, of which the following is a specification.

My invention relates to the method of forming cement blocks having a water-proof facing, its object being to water-proof the exposed face of the block without the application of external pressure or the use of special water-proofing compounds, and in such manner that the block can be immediately removed from the mold.

Cement blocks, as distinguished from cast stone, are usually formed by pressing or tamping in a mold a mixture of sand and cement in a damp or semi-dry state so that the blocks can be immediately removed from the mold. The block, when formed and cured, is a porous body with interstices, voids, or pores between the particles of sand and cement, to which mortar will adhere in wall construction, but which must be waterproofed on its exposed face to prevent the absorption of moisture.

Where a special water-proofing compound is used, it is apt to destroy perfect crystallization during the curing period as well as to discolor the block. And where a special water-proofing compound is not used, the surface to be water-proofed must be thoroughly wet in order that the cementitious material used for water-proofing shall enter the pores of the block and become thoroughly crystallized so as to form a perfect union. In the manufacture of what is called "cast stone," the cement and aggregate (sand, marble dust and the like) is mixed to a flowing mass and cast in a mold, from which it cannot be removed until it has hardened and set, that is from three to ten or twelve hours, according to the temperature and set of the cement. It is impracticable to apply this liquid process to cement blocks by placing in the bottom of the mold a sloppy mixture of cementitious material and then forming the cement block upon it, because the block cannot be removed from the mold until the wet mixture has set, and the cementitious material will not enter the pores of the block except under pressure.

In the present method the block is first formed in the usual manner by mixing sand and cement in a slightly moist or semi-dry state, and pressing or tamping it in a mold. Water is next applied, as by sprinkling, to the face of the block in sufficient quantity to enter the pores or interstices of the block, and then a powder of cement, either neat or mixed with sand or other ingredients, is sifted upon the water, which is at the same time agitated so as thoroughly to saturate the face of the block. The water will thus enter the pores or voids of the block to the required depth, and carry with it the cement powder sifted thereon. The water serves both to carry the cement into the pores and to cause crystallization of the added cement, and no external pressure will be required to force the water and cement into the block. The face of the block is then stippled or otherwise treated as may be desired, and the block removed from the machine and cured in the usual manner.

It will be understood that the main portion of the block remains in a comparatively dry state so that it can be immediately removed from the mold, and all its faces, except those exposed to the water and crystallizing mixture, will be porous so that the mortar will adhere to them, while the outer face will be proof against the absorption of water because all of the interstices and pores have been filled with crystallized cement.

The word "block" is here used generically to include a brick, tile or other mass of any shape or size, as well as a "block" technically so called.

I claim as my invention:

1. The herein described method of forming a water-proof faced cement block, which consists in first forming the block of suitable material in a semi-dry state, applying water to the face of the block in a sufficient quantity to enter the pores or interstices thereof, and adding cement to the water, whereby the cement will enter the pores or interstices with the water.

2. The herein described method of forming a water-proof faced cement block which

consists in first forming the block by mixing sand and cement in a semi-dry state and molding it, then applying water to the face of the block, then spreading cement upon the water and agitating the mixture to carry the cement into the interstices of the block to the required depth.

In testimony whereof I affix my signature in presence of two witnesses.

DAVID F. SHOPE.

Witnesses:
EDWIN R. HOLCOMBE,
H. SMITH.

DEFENDANTS EXHIBIT "A".

No. 624,563. Patented May 9, 1899.

C. W. STEVENS.

PROCESS OF MAKING ARTIFICIAL STONE.

(Application filed Nov. 12, 1897.)

(No Model.) 2 Sheets—Sheet 1.

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Fig. 1.

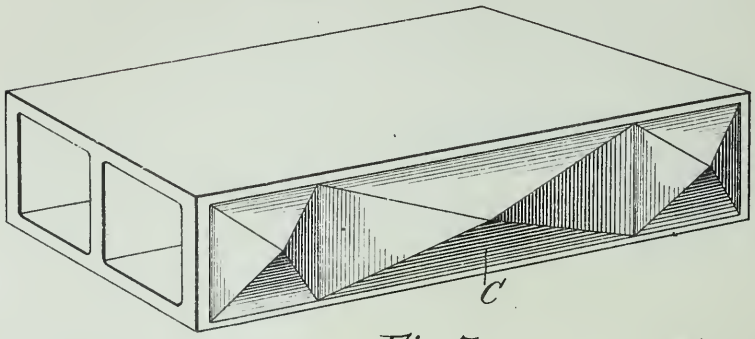


Fig. 2.

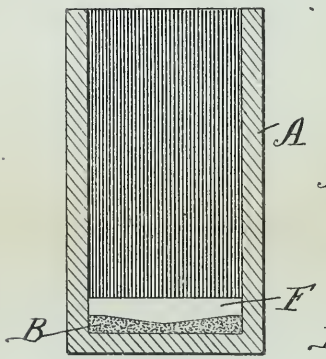


Fig. 3.

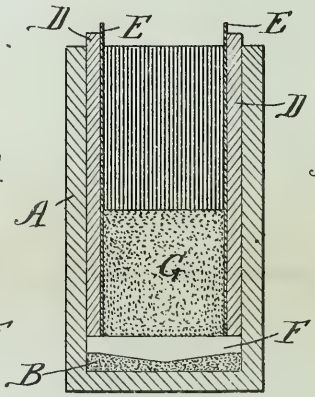
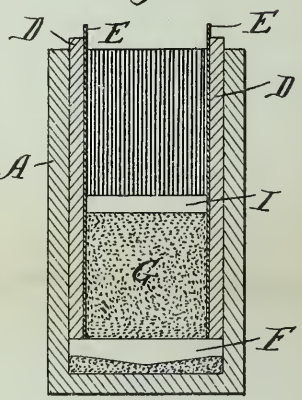


Fig. 4.



E Fig. 5. E

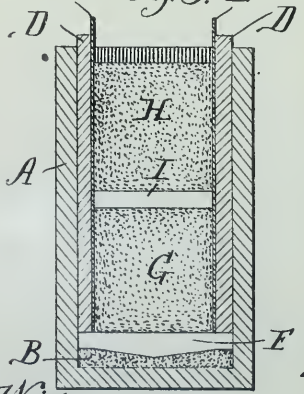


Fig. 6.

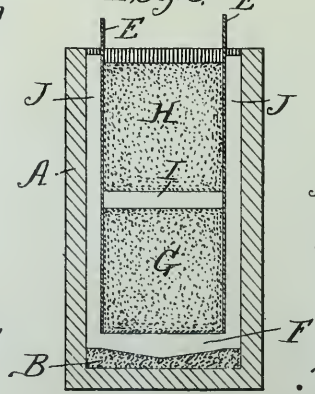
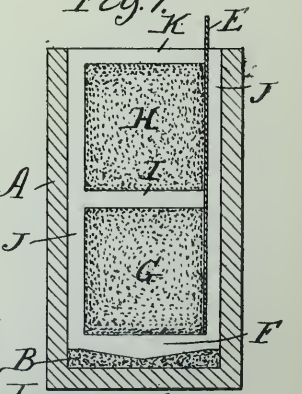


Fig. 7.



Witnesses.
Wm. M. Rheem.
Wm. A. Fleming

Inventor
Chas. W. Stevens
by Raymond & Cushman Attys

No. 624,563. Patented May 9, 1899.

C. W. STEVENS.

PROCESS OF MAKING ARTIFICIAL STONE.

(Application filed Nov. 12, 1897.)

(No Model.) 2 Sheets—Sheet 2.

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Fig. 8

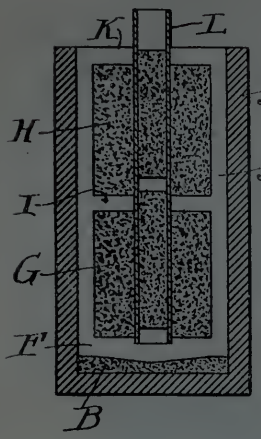


Fig. 9

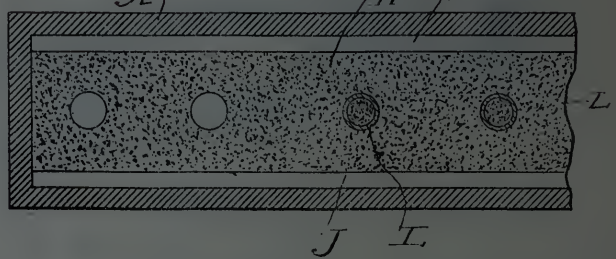


Fig. 10

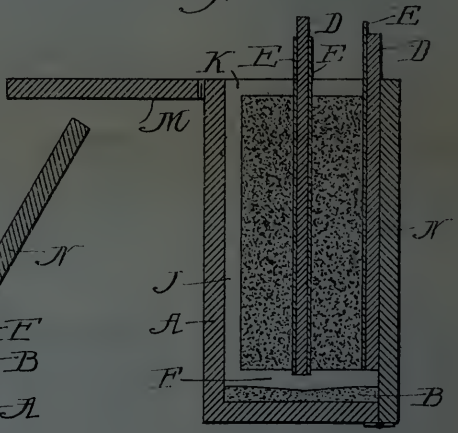
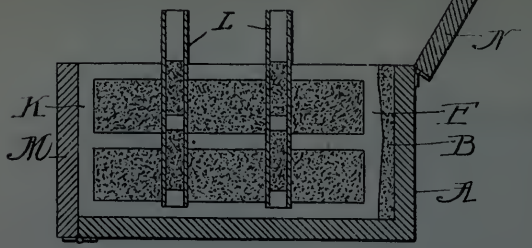


Fig. 11



Witnesses
E. F. Bartlett
Wm. M. Rheem

Inventor
Chas. W. Stevens
by Raymond & Dushmund
Attys

UNITED STATES PATENT OFFICE.

CHARLES W. STEVENS, OF HARVEY, ILLINOIS.

PROCESS OF MAKING ARTIFICIAL STONE.

SPECIFICATION forming part of Letters Patent No. 624,563, dated May 9, 1899.

Application filed November 12, 1897. Serial No. 658,273. (No specimens.)

To all whom it may concern:

Be it known that I, CHARLES W. STEVENS, a citizen of the United States, residing at North Harvey, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Processes of Making Artificial Stone, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming a part of this specification.

This invention relates to improvements in the processes for the manufacture of artificial stone, and particularly to that class exemplified by Letters Patent of the United States No. 583,515, granted to me June 1, 1897.

The object of the present invention, generally stated, is the same as the object of the invention disclosed in the said Letters Patent—to wit, the production of either plain or ornamental artificial stone in the place where it is to be permanently used or in a factory from whence it is distributed for use.

The object of the present invention, more specifically stated, is an improvement in the processes for manufacturing artificial stone, whereby either solid or hollow, plain or ornamented artificial stone may be produced, adaptable for any building purposes, such as cornices, courses, fronts, or any other purpose to which natural stone is generally applied in building, and at the minimum cost, both of material and workmanship, and of such simplicity as to dispense with the employment of skilled labor.

The process described in my former patent above mentioned is what I have designated as the "dry" process, the stone-producing compound being therein molded and manipulated in a dry powdered form in the molding operation and subsequently saturated with water. In my present invention, which I have designated as the "wet" process, the stone-producing compound is molded and manipulated in a wet or plastic state, and the final step of saturation of both the compound and the molding-sand is dispensed with, the molding-sand in my present invention being comparatively dry and relied upon to extract or absorb the moisture from the stone compound.

In carrying out my process any suitable form of apparatus may be employed; but I have found by practice that the apparatus illustrated in the accompanying drawings possesses many advantages over any other apparatus known to me.

I will therefore describe and illustrate my said novel apparatus in connection with my process as the preferred form of apparatus for carrying out the same, without, however, desiring to in any manner limit my invention to the use of such an apparatus.

In the drawings, Figure 1 represents a perspective view of a typical completed hollow stone as produced by my process. Figs. 2 to 7, inclusive, illustrate one way of using my preferred form of apparatus in carrying out my process, as will be described in detail farther on. Figs. 8 to 11, inclusive, represent detail views illustrating a further use of my invention for producing a superior article of manufacture by my process, as will be described in detail farther on.

While my process is adaptable to the manufacture of any kind, form, or configuration of stone, it is particularly applicable to what is called "hollow stone," resembling in shape the ordinary terra-cotta hollow building-tiles with strengthening cross-webs, for cornice-work, ornamental coursework, entire fronts, and the like, and I will therefore describe my process in detail as employed in the manufacture of such hollow stone, it being understood, of course, that the apparatus, even of my preferred form, must be varied as to dimensions, configuration, and use, according to the article which it is desired to produce.

Referring now to the drawings, I will first say that we will assume the form of hollow stone illustrated in Fig. 1 is sought to be produced by the apparatus in the manner illustrated in Figs. 2 to 7.

I first take a box A, of suitable dimensions, corresponding to a molder's flask, the inner walls of which I prefer should serve as the faces against which all of the outer plane faces of the stone article shall be molded except the ornamented and opposite faces thereof. In the bottom of this box I place a suitable layer of fine molder's sand of any suitable thickness and in a just sufficiently-moistened condition to hold its form when pressed to any desired shape. In other words, I pro-

pose to have this sand as dry as possible for the intended purpose. Into this sand with a suitable pattern I impress the shape of the ornamented face desired—such, for instance, as the face C of the stone illustrated in Fig. 1—which pattern should preferably extend over the entire area of the interior of the box. I next pour into the impression thus made the stone compound in a plastic or semiliquid state, sufficiently wet to flow easily and to a depth corresponding with the desired thickness of the hollow stone. This compound may consist of any stone-producing mixture of materials and may be either colored throughout or mixed to produce a mottled effect or to produce contrasting colors on the face of the ornamental stone, and, in fact, different colors of the compound may be poured to form different parts of the ornamented face. This first manipulation, as far as described, is illustrated in Fig. 2. I next insert the parting-boards D at the vertical sides of the box, which are faced with metallic facing-plates E of suitable form upon the interior of the box. Both the parting-boards and facing-plates rest upon the back or top of the ornamented stone facing and preferably extend a little beyond the upper edges of the box. I then fill in the box, say, to about one-half its depth (or to any other point, according to the number of strengthening-webs desired) with the molding-sand, as at G, in as nearly dry a state as is practicable, and upon this sand filling pour a suitable layer of the stone compound in a plastic or semiliquid state. Figs. 3 and 4 serve to illustrate the use of the apparatus as thus far described. I next fill in with more molding-sand, practically dry, nearly to the top of the box, as illustrated at H in Fig. 5. Having now formed in the sand the ornamented front wall F and the strengthening-web at the center of the hollow stone, I next successively draw out the parting-boards D and pour into the spaces formed by them the stone compound, which flows down to and unites with the front F and the strengthening web or partition I, thereby forming the sides J of the hollow stone, as illustrated in Fig. 6. I next withdraw the facing-plates E, as illustrated in Fig. 7, and fill in to the top of the box with the stone compound, which unites with the sides J and forms the back wall K of the hollow stone. The hollow stone is now completely molded and may now be laid aside for setting or curing in any well-known or desired manner, according to the compound used.

The use of the parting-boards is desirable, as will be readily seen, in order to have a wall to build against and at the same time which may be withdrawn to allow the stone compound to flow in and take its place. The use of the metallic face-plates, in connection with the parting-boards, is also very desirable, because neither the sand nor the stone compound will adhere thereto, as they would to the parting-boards, and hence when withdrawn they leave comparatively sharp and square edges as between the stone material and the molding-sand, thus producing an article of superior finish. I may also say that if found desirable the top layer of stone compound, forming the back K of the hollow stone, may be covered with a sufficient layer of sand to properly aid in the absorption of the moisture from this part of the compound and at the same time protect the same against the direct action of the atmosphere thereon, which might in some cases produce weather-checking.

It will of course be understood that I have herein illustrated and described the simplest form of apparatus and a type of the simplest form of hollow stone which can be produced by my process, and it will of course be understood that in the making of artificial stone of different shapes, contours, and dimensions the box, the parting-boards, and the facing-plates must be modified accordingly, for obviously hollow stone with both ornamented sides and ends or with obliquely or otherwise disposed ornamentation and contour extending in various directions may be produced by my process and apparatus without any variation whatever in the process and practically no variation in the apparatus, excepting that the use of the parting-boards and facing-plates would probably in all cases be limited to the plane surfaces, although that is not absolutely essential, because the blocks may be molded with either top, bottom, sides, or ends uppermost or in an oblique position, according to the particular article being made. I have also found by practical experience that in the molding of either delicate or intricate ornamental designs the best results can be obtained by first filling in the impression of the pattern made in the sand to the depth of about an eighth of an inch with dry stone compound and backing it up with the liquid compound, because the fine lines and sharp edges will be better brought out, the dry powdered stone compound entering the depressions formed by the pattern more perfectly than the plastic or semiliquid compound. I have also found that where it is desirable greater strength may be given the hollow stone, either laterally or longitudinally, than is afforded by the strengthening web or partition formed therein in the molding of the stone by providing posts extending between the exterior walls, either front and back or sides, and also, if desired, between the partitions and the external walls. These posts are formed of the stone compound in the manner about to be described, it being understood that in both cases the posts are formed before the hollow stone is allowed to set or is cured. In other words, I am able to produce by this process an article superior in strength to that produced by any other process and by the use of the same apparatus employed in carrying out the process.

In producing a hollow stone thus strengthened of the form illustrated in Figs. 1 to 8 of the drawings I would take a tube L, preferably metallic, and after the stone is completed, as illustrated in Fig. 7, I would force the tube through both the back wall K and partition I, partly through the front F, and of course through the sand fillings or layers G and H and then withdraw the tube, carrying with it the sand and stone compound by which it will be filled. As many of these holes as desirable may be formed along the length of the stone and then filled with the plastic or semiliquid compound up to a level with the surface of the back wall K. Each post will form a homogeneous union with the back and front walls and the partition, besides extending therebetween, so that when the filling-sand is removed from the stone these posts will serve as braces between the front and rear wall and the partition or strengthening-web. In Fig. 8 I have illustrated a vertical section of the molding-box with the stone complete, showing the manner of using the tube L to form the posts. In Fig. 9 I have illustrated a horizontal section of the same, but showing some posts completed and others with the tubes in place preparatory to making the holes for the posts.

In Figs. 10 and 11 I have shown how a hollow stone formed with its ornamented face down and having a strengthening-web at right angles to the back wall K thereof may be provided with posts extending through such partition or web and between the upper and lower walls or sides of the block parallel with the back wall. In such case I prefer to employ a hinged top M and a hinged side N for the mold-box in order that the posts may be formed through the sides of the hollow stone after the same has been formed face downward or in a position at right angles to that in which the posts are formed. In this apparatus it will be noticed that the parting-board D has a facing-plate E on each side thereof to form the strengthening-web, and it will of course be understood that the same means can be adopted for forming the side walls J, in which case of course the side parting-boards D would be set a suitable distance away from the sides of the box or flask, and a layer of sand would intervene between said boards with their double facings and the sides of the box. The stone will thus be formed by molding the stone compound wholly in sand—that is, with sand on all sides or upon each side of each layer of the compound.

I may here state that while the hollow building-stone may be the more common form in which such stones are produced it is within the purview of my invention to produce solid stone blocks or to produce solid flat or concave tiles for use in ornamental coursework, in which case the apparatus would necessarily consist only of a box of the desired shape and dimensions, for after the impression is made in the sand in the bottom of the box the compound will be poured in to a suitable depth and then backed up by a sufficient layer of sand to properly absorb the moisture.

Having thus fully described my invention, what I claim, and desire to secure by Letters Patent, is—

1. The process of forming artificial stone consisting in molding the stone compound while in a plastic or semiliquid state in or on a mold formed of relatively dry sand and then allowing the mass to set until the sand absorbs the surplus moisture from the compound, thereby converting the latter to a solid or non-liquid form, substantially as and for the purpose set forth.

2. The process of forming artificial stone consisting in molding stone compound while in a plastic or semiliquid state, in or on a partial mold formed of relatively dry sand, and then covering the compound with relatively dry sand and finally allowing the mass to set until the sand absorbs the surplus moisture from the compound, thereby converting the latter to a solid or non-liquid form, substantially as and for the purpose set forth.

3. The process of forming artificial stone consisting in molding layers of stone compound while in a plastic or semiliquid state between or on layers of relatively dry sand and then allow the mass to set until the sand absorbs the surplus moisture from the compound, thereby converting the latter to a solid or non-liquid form, substantially as and for the purpose set forth.

4. The process of forming artificial stone consisting in first molding layers of stone compound while in a plastic or semiliquid state between or on layers of relatively dry sand, then removing a portion of such layers of compound and sand and replacing such removed portions with stone compound in a plastic or semiliquid state and finally allowing the mass to set until the sand absorbs the surplus moisture from the compound, thereby converting the latter to a solid or non-liquid form, substantially as and for the purpose set forth.

5. The process of forming artificial stone consisting in first forming in relatively dry sand a partial mold of one or more faces of such stone, next filling into the partial mold thus formed a lining or layer of stone compound in a dry powdered state, then molding thereon a layer of stone compound in a plastic or semiliquid state next covering the compound with relatively dry sand and finally allowing the mass to set until the sand absorbs the surplus moisture from the compound, thereby converting the latter to a solid or non-liquid form, substantially as and for the purpose set forth.

CHARLES W. STEVENS.

Witnesses:
WM. O. BELT,
C. L. WOOD.

DEFENDANTS' EXHIBIT "B."

[Endorsed]: U. S. District Court, District of Oregon. Filed April 4, 1924. G. H. Marsh, Clerk.

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE.

To all persons to whom these presents shall come,
GREETINGS:

This is to certify that the annexed is a true copy from the records of this office of the File Wrapper and Contents, in the matter of the

LETTERS PATENT OF
David F. Shope.

Number 985,709,

Granted February 28, 1911.
for

Improvement in Methods of Water Proofing Cement Blocks.

IN TESTIMONY WHEREOF I have hereunto set my hand and caused the seal of the Patent Office to be affixed, at the City of Washington, this twenty-fourth day of October, in the year of our Lord, one thousand nine hundred and twenty-three and of the Independence of the United States of America the one hundred and forty-eighth.

WM. A. KINNAN,
Acting Commissioner of Patents.

(Seal—Patent Office United States of America.)

(1) [212]

Div. 15 1909 (Ex'r's Book) 66 59–14

PATENT No.—985709.

Number (Series of 1900), 521,796.

Name—David F. Shope.

Of St. Paul,

State of Minnesota.

Invention: Method of Waterproofing Cement Blocks.

Original.

Petition— Oct. 9, 1909.
Affidavit— " " "
Specification— " " "
Drawing— none.
Model or Specimen.
First Fee—Cash $15. Oct. 9, 1909.
" " —Cert.
Appl. filed complete Oct. 9, 1909.

Division of App. No. ——, filed ——, 190
Parts of Application Filed.

Examiner—Chas. C. Stauffer, Ex. Aug. 2, 1910.

Countersigned—H. B. Bursch,
For Commissioner.

Notice of Allowance Aug. 6, 1910.

Final Fee—Cash $20. Feb. 1, 1904.
" " —Cert.

Patented—February 28, 1911.

Associate Attorney—Wm. N. Cromwell,
1003 F. Street, N. W.,
Washington, D. C.

Attorney Lothrop & Johnson,
Pioneer Press Bldg.,
St. Paul, Minn.

(2) [213]

Arthur P. Lothrop. H. S. Johnson.

LOTHROP & JOHNSON,
Patent and Trade Mark Law,
Pioneer Press Building.

St. Paul, Minn., October 6, 1909.

Hon. Commissioner of Patents,
Washington, D. C.

Sir:

We enclose application papers in the application of David F. Shope for patent upon Method of Water Proofing Cement Blocks, together with our check for $15 to cover the Government filing fee.

Yours respectfully,
LOTHROP & JOHNSON.

$15 received.
Chief Clerk. U. S. Patent Office. 521796
1

(3) [214]

(1) 521,796 1
701 (Mail Room.
Oct. 9, 1909.
U. S. Patent Office.) 8606

PETITION.

To the Commissioner of Patents:

Your petitioner, David F. Shope, a citizen of the United States, residing at St. Paul, in the County of Ramsey and State of Minnesota, whose postoffice address is 20 E. 4th St., St. Paul, Minn., prays that Letters Patent may be granted to him for the improvement in

Method of Water Proofing Cement Blocks set forth in the annexed specification.

And he hereby appoints

Lothrop & Johnson,

Pioneer Press Building, St. Paul, Minnesota, a firm consisting of Arthur P. Lothrop and H. S. Johnson (Registered No. 4387 in the U. S. Patent Office), his attorneys, with full power of substitution and revocation, to prosecute this application, to make alterations and amendments therein, to receive the Patent, to sign the drawings and to transact all business in the Patent Office connected therewith.

Inventor must sign first given name in full.

DAVID F. SHOPE.

SPECIFICATION.

To All Whom It May Concern:

Be it known that I, David F. Shope, a citizen of the United States, residing at St. Paul, in the County of Ramsey and State of Minnesota, have invented certain new and useful improvements in Methods of Water Proofing Cement Blocks, of which the following is a specification.

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(4) [215]

My invention relates to the method of forming water proof facing upon cement blocks without the use of special water proofing compounds and has for its object to provide a method of water proofing the exposed faces of the blocks in a cheap, simple, expeditious, and efficient manner.

Substitute A 1

(50) Cement blocks are ordinarily formed of a semi-dry mixture of sand and cement, and when formed and cured the block is a porous body with interstices, spaces, or pores between the particles of sand and cement. This gives it a surface to which mortar will adhere in wall construction, but which must be water proofed on its exposed face or faces to prevent the absorption of water. It has been customary to use for this purpose special water proofing compounds, which destroy perfect crystallization during the curing period, and which may discolor the block.

The present method consists in first forming the block in the ordinary manner by mixing sand and cement in a semi-dry state and pressing or tamping it in a mold. Water is then poured upon the face of the block until it is covered, and a powder of cement, either neat or mixed with sand or other ingredients, is sifted or otherwise spread upon the water, the water and cement mixture being at the same time agitated to carry it into the pores or interstices in the block to the required depth, and thoroughly to saturate the face thereof. The water serves both to carry the cement into the pores and to cause crystallization of the added cement. The face of the block is then stippled to roughen it as may be

desired, and the block is removed from the machine and cured in the usual manner.

It will be understood that the main portion of the block remains in a comparatively dry condition so that it can (5) [216] be easily removed from

10–9–09. 1. 521796
3.
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the machine, and all the faces except those exposed to the water and crystallizing mixture will be porous so that the mortar will adhere to them, while the outer face will be proof against the absorption of water because all of the interstices and pores have been filled with crystallized cement.

The word "block" is here used generically to include a brick, tile or other mass of any shape or size, as well as a "block" technically so called.

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(6) [217] 4
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I claim as my invention:

Substitute A B 1

1. The herein described method of water proofing the faces of cement blocks which consist in first mixing cement and sand in a semi dry condition and molding it into blocks, then applying water upon the face of the block and spread- (ck.1)
ing dry cement thereon.
forming a water-

Per A

2. The herein described method of / ~~water-proofing~~ proof faced

" " ~~the faces of~~ cement block~~s~~ which consists in first
" " forming the block by mixing sand and cement in a semi dry state and molding it, then ~~pouring~~ applying
Per B A ~~poring~~ / water Λ ~~upon~~ the face of the block to
" " ~~until it is covered~~, then spreading cement upon the water and agitating the mixture to carry the cement into the interstices of the block to the required depth. Sigs.

3. The herein described method of water proofing
Per A the faces of cement blocks which consists in first molding cement and sand in a semi dry state, then covering the face of the block with water, then spreading cement upon the water and agitating the mixture, and then stippling the face of the block.

10–9–09 521796
5

In testimony whereof I affix my signature in presence of two witnesses:

Inventor MUST sign first given name in full.

DAVID F. SHOPE.

Witnesses:

EDWIN R. HOLCOMBE.

H. SMITH.

8610

OATH.

State of Minnesota,
County of Ramsey,—ss.

David F. Shope, the above-named petitioner, being duly sworn, deposes and says that he is a citizen of the United States and resident of St. Paul, Ramsey County, Minnesota, and that he verily believes himself to be the original, first and sole inventor of the improvement in

Method of Water Proofing Cement Blocks,

described and claimed in the annexed specification: that he does not know and does not believe that the same was ever known *of* used before his invention or discovery thereof; or patented or described in any printed publication in any country before his invention or discovery thereof, or more than two years prior to this application; or in public use or on sale in the United States for more than two years prior to this application; that said invention has not been patented in any country foreign to the United States on an application filed by him or his representatives or assigns, more than twelve months prior to this application; and that no ap-

plication for patent on said improvement has been filed by him or his representatives or assigns in any country foreign to the United States.

Inventor sign here—Sign first given name in full.

DAVID F. SHOPE,

Subscribed and sworn to before me this 5th day of October, 1909.

[Notarial Seal] E. R. HOLCOMBE,

Notary Public, Ramsey County, Minnesota.

My commission expires May 12, 1916.

10–9–09

521796

6

(8) [219]

AS

Div. 15 Room 308
Address only
The Commissioner of Patents,
Washington, D. C.

Paper No. 2
All communications respecting this application should give the serial number, date of filing, and title of invention.

DEPARTMENT OF THE INTERIOR.
UNITED STATES PATENT OFFICE
Washington, D. C.

Jan. 4, 1910.

David F. Shope,
c/o Lothrop & Johnson,
Pioneer Press Bldg.,
St. Paul, Minn.,

Stamp:
U. S. Patent Office
Jan. 4, 1910
Mailed
Division 15

Please find below a communication from the EXAMINER in charge of your application, for

Method of Water Proofing Cement blocks, filed Oct. 9, 1909, #521,796.

E. B. MOORE,
Commissioner of Patents.

This case has been examined.

Claims 1 and 2 are rejected on
Jaques, #748,611, Jan. 5, 1904, (25 – 1 P)
Haddock, #531,842, Jan. 1, 1895 "

Claim 3 is rejected on
Lake, #743,525, Nov. 10, 1903 "
Henderson, #886,124, Apr. 28, 1908 "

CHAS. C. STAUFFER,
Examiner.

OBR.

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(9) [220]

Mail Room, Serial No. 8611
Apr. 11, 1910.
U. S. Patent Office. Paper No. 3
A

IN THE UNITED STATES PATENT OFFICE.

Inventor: David F. Shope.

Subject: Method of Water Proofing Cement Blocks.

Filed October 9, 1909. Ser. No. 521,796. Room 308.

Hon. Commissioner of Patents,
Washington, D. C.

Sir:

I hereby amend the above-entitled application as follows in response to the Office Action of January 4th, 1910:

Cancel the specification and substitute therefor the following:

"My invention relates to the method of forming cement blocks having a water-proof facing, its
A 1 object being to water-proof the exposed face of the block without the application of external pressure or the use of special water-proofing compounds, and in such manner that the block can be immediately removed from the mold.

Cement blocks, as distinguished from cast stone, are usually formed by pressing or tamping in a mold a mixture of sand and cement in a damp or semi-dry state so that the blocks can be immediately removed from the mold. The block, when formed and cured, is a porous body with interstices, voids, or pores between the particles of sand and cement, to which mortar will adhere in wall construction, but which must be water-proofed on its exposed face to prevent the absorption of moisture.

Where a special water-proofing compound is used, it is apt to destroy perfect crystallization during the curing period as well as to discolor the block. And where a special water-proofing (10) [221] 4–11–10

1. 521796 8

compound is not used, the surface to be water-proofed must be thoroughly wet in order that the cementitious material used for water-proofing shall enter the pores of the block and become thoroughly crystallized so as to form a perfect union. In the manufacture of what is called "cast stone," the

cement and aggregate (sand, marble dust and the like) is mixed to a flowing mass and cast in a mold, from which it cannot be removed until it has hardened and set, that is from three to ten or twelve hours, according to the temperature and set of the cement. It is impracticable to apply this liquid process to cement blocks by placing in the bottom of the mold a sloppy mixture of cementitious material and then forming the cement block upon it, because the block cannot be removed from the mold until the wet mixture has set, and the cementitious material will not enter the pores of the block except under pressure.

In the present method the block is first formed in the usual manner by mixing sand and cement in a slightly moist or semi-dry state, and pressing applied or tamping it in a mold. Water is next ~~poured~~ as by sprinkling to ~~upon~~ the face of the block in sufficient quantity enter the pores or interstices of the block to ~~cover it well,~~ and then a powder of cement, either neat or mixed with sand or other ingredients, is sifted ~~or otherwise spread~~ upon the water, which is at the same time agitated so as thoroughly to saturate the face of the block. The water will thus enter the pores or voids of the block to the required depth, and carry with it the cement powder sifted thereon. The water serves both to carry the cement into the pores and to cause crystallization of the added cement, and no external pressure will be required to force the water and cement into the

block. The face of the block is then stippled or otherwise treated as may be desired, and the block removed from the machine and cured in the usual manner.

It will be understood that the main portion of the

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(11) [222]

block remains in a comparatively dry state so that it can be immediately removed from the mold, and all its faces, except those exposed to the water and crystallizing mixture, will be porous so that the mortar will adhere to them, while the outer face will be proof against the absorption of water because all of the interstices and pores have been filled with crystallized cement.

The word "block" is here used generically to include a brick, tile or other mass of any shape or size, as well as a "block" technically so called. See 8609

Cancel claims 1 and 3 and substitute therefor the following claim:

A 2 Substitute B 1

"1. The herein described method of forming a water-proof faced cement block which consists in first mixing cement and sand in a semi-dry state and molding it into a block, next covering the face of the block with water and then sifting dry cement thereon, whereby the water will carry the added cement into the pores of the block without the application of external pressure."

In claim 2, lines 1 and 2, erase "water-proofing the faces of cement blocks" and substitute therefor "forming a water-proof faced cement block."

In claim 2, line 4, change "poring" to pouring.

NOTE.

The specification and claim 1 have been rewritten in order to bring out more clearly the characteristic novelty of applicant's invention and its differentiation from the prior art.

Lake and Henderson, which were cited against claim 3 drawn to the stippled face feature, described merely the ordinary cast stone process of pouring a wet, flowing mixture into a mold and letting it stand and set, and are therefore not in point except (12) [223] perhaps, as to the

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4–11–10 3. 10

8614

feature of stippling the face of the block. Claim 3 has, however, been cancelled as adding nothing of novelty to claims 1 and 2.

Jaques makes his facing by limiting the mold, and covering the top of the block, with a "cementitious slurry," or semi-fluid cement mixture, which is forced into the pores of the cement under pressure by means of a plunger or ram; and after that is done the mass must remain in the mould to set and harden, as in the cast stone process.

Jaques has to use external pressure to force the water from his slurry into the block because the slurry is mixed first and then applied. When so done the moisture will not carry the cement into

the pores except under pressure, in which case the mass must stand and set before it can be released, whereas in applicant's the water is put on first and the cement sifted on afterwards, so that the cement and water will be absorbed into the mass without the application of pressure, and will form a perfect bond.

Haddock's process does not form a waterproof outer facing, because he puts the outer stratum of the block at the bottom of the mold in a semi-dry state, or, as he says, in a "moist rather than wet condition" and builds up the block above it. There is not water enough in this stratum to fill the voids and make the facing waterproof. He is therefore obliged to interpose between this facing and the body of the block a special waterproof stratum B, which, of course, prevents moisture from penetrating the main mass A, but which does not secure a waterproof outer facing. Indeed, there is no object in his non-waterproof facing C except that, as it is in a semi-dry condition, it enables him to remove the block at once from the mold. Obviously, as Haddock places his facing C at the bottom of the mold it would not release when the mold is pulled away if it were not wet enough to become waterproof.

8615

Claim 2 is thought to be allowable as it stands and reconsideration is respectfully asked.

Applicant's process is essentially different from any of the references, and has gone into extensive and successful use, and is recognized by the trade as something distinctly new.

It is thought that the case is now in condition for allowance, which is respectfully asked.

Respectfully submitted,

DAVID F. SHOPE.

By LOTHROP & JOHNSON,

His Attorneys.

April 8th, 1910.

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5. 12

(14) [225]

Div. 15—Room 308. AS

Paper No. 4

All communications respecting this application should give the serial number, date of filing and title of invention.

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DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C.

Apr. 19, 1910.

David F. Shope,
c/o Lothrop & Johnson,
Pioneer Press Bldg.,
St. Paul, Minn.

U. S. Patent Office
Apr. 19, 1910.
Mailed.

Please find below a communication from the EX-

AMINER in charge of your application for METHOD OF WATER PROOFING CEMENT BLOCKS, filed Oct. 9, 1909, $521,796.

E. B. MOORE,
Commissioner of Patents.

This case considered as amended Apr. 11, 1910.

Claim 1 covers nothing beyond the ordinary process of laying cement sidewalks when the surface of the pavement is coated in whole or in part with water brought to the surface by tamping. It is accordingly rejected upon Haddock.

Claim 2 seems allowable.

CHAS. C. STAUFFER,
Examiner.

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(15) [226]

Paper No. 5.

Application Room,
Jun. 14, 1910.
U. S. Patent Office.

ASSOCIATE POWER OF ATTORNEY.

The Honorable Commissioner of Patents:

Please recognize WILLIAM NEVARRE CROMWELL, of 1003 F Street, N. W., Washington, D. C. Registry No. 241, as Associate Attorney in the prosecution of the application of DAVID F. SHOPE, filed October 9, 1909, Serial No. 521,796, for improvements in METHOD OF WATER-PROOFING CEMENT BLOCKS, with the usual powers, and address all communications relating thereto to him.

Signed at —— in the County of ——, and State of ——, this —— day of ——, 190—.

LOTHROP & JOHNSON.

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(16) [227]

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Serial No. Paper No. 6.

Application Room. B
Jun. 15, 1910.
U. S. Patent Office.

IN THE UNITED STATES PATENT OFFICE.

Before the Examiner.
Room No. 308.

In re Application of:
DAVID F. SHOPE,
METHOD OF WATER-PROOFING CEMENT BLOCKS.
Filed October 9, 1909.
Serial No. 521,796.

Hon. Commissioner of Patents,
Washington, D. C.,

Sir:

In response to Office action of April 19, 1910, the above-entitled application is hereby amended as follows:

Page 2 of the substitute specification, line 16 (page 2 of the amendment filed April 11, 1910) cancel "poured upon" and insert "applied, as by sprinkling, to."

Lines 16 and 17, cancel "cover it well" and insert "enter the pores of interstices of the block."

Redraw claim 1 as follows:

1. The herein described method of forming a water-proof faced cement block, which consists in
B–1 first forming the block of suitable material in a semi-dry state, applying water to the face of the block in a sufficient quantity to enter the pores or interstices thereof, and adding cement to the water, whereby the cement will enter the pores or interstices with the water."

Claim 2, line 4, change "pouring" inserted by amendment to "applying"; and also cancel "upon" add insert "to."

Same claim, lines 4 and 5, cancel "until it is covered."

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(17) [228]

8617

REMARKS.

The foregoing amendments are made pursuant to the understanding with Principal Examiner Stauffer during a personal interview.

Applicant has redrawn claim 1 in the light of the disclosure of the patents of record and the prior art cited by the Examiner, and it is clearly patentable thereover. The claim as now submitted is in the form in which it was presented during the interview above mentioned.

In support of this claim attention is respectfully directed to the fact that in applicant's process the forming of the block is done with the material in a semi-dry state, so that this material will have a certain degree of absorption, and will release from

the mould at once without first standing to dry and set. With the block in this condition, applicant then adds or applies water to the face of the block in such quantity that it will enter the pores or interstices of the block, and to the water adds cement, so that as the water enters the pores or interstices, it will also carry the added cement into the pores or interstices, so that this cement will fill the voids and become crystallized. This result is accomplished without the necessity of employing any external pressure to force the water and cement into the block, as is the case in the references, and differs essentially from a process where the material is put into the mould wet and the water in or under the same is brought to the surface by tamping, for in such case the block will not release from the mould without first standing for some time to dry and harden; neither will it have adequate absorptive power to absorb any added cement.

Claim 1 as now presented certainly defines a pro-

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2. 16

(18) [229]

cess which is materially different from the prior art cited by the Examiner, and patentably distinguishes therefrom, and allowance of this claim is respectfully requested.

WM. N. CROMWELL,
Associate Attorney.

Washington, D. C., June 14, 1910.

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4. 17

(19) [230]

Address only
The Commissioner of Patents, O'D.
Washington, D. C.

2–181 Serial No. 521,796.

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE.
Washington.

August 6, 1910.

David F. Shope,
c/o Wm. N. Cromwell,
Washington, D. C.

Sir:–

Your APPLICATION for a patent for an IMPROVEMENT in

Method of Waterproofing Cement Blocks,

filed Oct. 9, 1909, has been examined and ALLOWED.

The final fee, TWENTY DOLLARS, must be paid not later than SIX MONTHS from the date of this present notice of allowance. If the final fee be not paid within that period the patent on this application will be witheld, unless renewed with an additional fee of $15, under the provisions of Section 4897, Revised Statutes.

The office delivers patents upon the day of their date, and on which their term begins to run. The printing, photolithographing, and engrossing of the several patent parts, preparatory to final signing and sealing, will require about four weeks, and such work will not be undertaken until after payment of the necessary fee.

In remitting the final fee give the serial number at the head of this notice.

Uncertified checks will not be accepted.

When you send the final fee you will also send, DISTINCTLY AND PLAINLY WRITTEN, the name of the INVENTOR and TITLE OF INVENTION AS ABOVE GIVEN, DATE OF ALLOWANCE (which is the date of this circular) DATE OF FILING, and, if assigned, the NAMES OF THE ASSIGNEES.

If you desire to have the patent issue to ASSIGNEES, an assignment containing a REQUEST to that effect, together with the FEE for recording the same, must be filed in this office on or before the date of payment of final fee. [231]

After issue of the patent uncertified copies of the drawings and specifications may be purchased at the price of FIVE CENTS EACH. The money should accompany the order. Postage stamps will not be received.

Final fees will NOT be received from other than the applicant, his assignee or attorney, or a party in interest as shown by the records of the Patent Office.

Respectfully,

E. B. MOORE,

Commissioner of Patents.

521796

(20) [232] 18

Address only Letter No.——
The Commissioner of Patents,
Washington D. C.
NBJ.

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington.

(Mail Room
U. S. Patent Office
Feb. 10, 1911.)

January 28, 1911.

Messrs. Lothrop & Johnson,
910 Pioneer Press Bldg.,
St. Paul, Minn.

Gentlemen:

Check No. 10020 for $20.00 received from you today with final fee slip in the application of David F. Shope 521796, is herewith returned for signature.

Upon receipt of check properly signed the same will be applied as directed.

Respectfully,
W. F. WOOLARD,
Chief Clerk.

Enclosure.

521196
19.

(U. S. Mail Room
Jan. 28, 1911
U. S. Patent Office.)

MEMORANDUM
of
FEE PAID AT UNITED STATES PATENT OFFICE.

(Be careful to give correct Serial No.) G.
Serial No. 521,796. 191—
Inventor: David F. Shope.
Patent to be issued to———————————
Name of invention, as allowed: Method of Water Proofing Cement Blocks.
Date of Payment: January 26th, 1911.
Fee:
Final Ck. #10020 for $20, not countersigned.
Date of Filing: October 9, 1909.
Date of Circular of Allowance: August 6, 1910.

The Commissioner of Patents will please apply the accompanying fee as indicated above.

LOTHROP & JOHNSON,
Attorney.

Send patent to
David F. Shope, Esq.,
c/o Lothrop & Johnson,
910 Pioneer Press Bldg.
St. Paul, Minnesota.

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(22) [234] 20

Arthur P. Lothrop H. S. Johnson

LOTHROP & JOHNSON,
Patent and Trade Mark Law,
Pioneer Press Building,
St. Paul, Minn., January 30, 1911.

$20 received
CH. Feb. 11, 1911.
Chief Clerk U. S. Patent Office.
Hon. Commissioner of Patents,
Washington, D. C.
Sir:

Pursuant to your letter of January 28th, 1911, we have signed and return to you our check No. 10020 for $20 sent you for final fee in the application of David F. Shope, Serial No. 521,796. Please apply the check upon the final fee as directed in the slip previously sent you.

Yours respectfully,
LOTHROP & JOHNSON,
By ARTHUR P. LOTHROP.

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(23) [235] 21

Address only
"The Commissioner of Patents,
Washington, D. C."

2—191 Serial No. 521,796.

CVQ.

DEPARTMENT OF THE INTERIOR.
UNITED STATES PATENT OFFICE,
WASHINGTON.

February 4, 1911.

David F. Shope,
c/o Lothrop and Johnson,
St. Paul, Minn.

(Stamp) Patent Will Issue
Feb. 28, 1911.

Sir:

You are informed that the final fee of TWENTY DOLLARS has been received in your application for Improvement in

Method of Water Proofing Cement Blocks,

Date of receipt—Feb. 1, 1911.

Very respectfully,

E. B. MOORE,
Commissioner of Patents.

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(24) [236]

United States District Court, District of Washington, Southern Div'n.

Mail Room.

Jul. 9, 23.

U. S. Patent Office.

Honorable Commissioner of Patents,
Washington, D. C.

Sirs:—

In compliance with the Act of February 18, 1922 (41 Stat. L.——), you are advised that there was filed on the 2nd day of July, 1923, in this court an action, suit, or proceeding No. 171–E, entitled:

NAME—Shope Brick Company, a Corp., Plaintiff,
ADDRESS—Portland, Oregon,

versus

NAME—Warren L. & Ray L. Smith, Name & Style "Smith Bros." Defendant,
ADDRESS—Tacoma, Wash., 3202 Delin St.

brought upon the following patents:

Patent No.	Date of Patent.	Patentee
1. 985709	Feby. 28, 1911	David F. Shope
2. 1270450	June 25, 1918	Do.
3.		
4.		
5.		

In the above-entitled case, on the —— day of ——, 192—, the following patents have been included by —— (insert amendment, answer, cross-bill, or other pleading):

Patent No.	Date of Patent.	Patentee
1.		
2.		
3.		
4.		
5.		

In the above-entitled case the following decision [237] has been rendered or decree issued:

IN WITNESS WHEREOF, I have affixed my hand this 2nd day of July, 1923, at Tacoma Washton.

ED M. LAKIN,
Deputy Clerk of Said Court.

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(25) [238]

UNITED STATES PATENT OFFICE

DAVID F. SHOPE, of St. Paul, Minnesota.

Method of Waterproofing Cement Blocks.

985,709 Specification of Letters Patent.
Patented Feb. 28, 1911.

No Drawing. Application filed October 9, 1909.
Serial No. 521,796.

To all whom it may concern:

Be it known that I, David F. Shope, a citizen of the United States, residing at St. Paul, in the County of Ramsey and State of Minnesota, have invented certain new and useful Improvements in Methods of Waterproofing Cement Blocks of which the following is a specification.

My invention relates to the method of forming cement blocks having a water-proof facing, its ob-

ject being to water-proof the exposed face of the block without the application of external pressure or the use of special water-proofing compounds, and in such manner that the block can be immediately removed from the mold.

Cement blocks, as distinguished from cast stone, are usually formed by pressing or tamping in a mold a mixture of sand and cement in a damp or semi-dry state so that the blocks can be immediately removed from the mold. The block, when formed and cured, is a porous body with interstices, voids, or pores between the particles of sand and cement to which mortar will adhere in wall construction, but which must be water-proofed on its exposed face to prevent the absorption of moisture.

Where a special water-proofing compound is used, it is apt to destroy perfect crystallization during the curing period as well as to discolor the block. And where a special water-proofing compound is not used, the surface to be water-proofed must be thoroughly wet in order that the cementitious material used for water-proofing shall enter

(26) [239]

the pores of the block and become thoroughly crystallized so as to form a perfect union. In the manufacture of what is called "cast stone," the cement and aggregate (sand, marble dust and the like) is mixed to a flowing mass and cast in a mold, from which it cannot be removed until it has hardened and set, that is from three to ten or twelve hours, according to the temperature and set of the

cement. It is impracticable to apply this liquid process to cement blocks by placing in the bottom of the mold a sloppy mixture of cementitious material and then forming the cement block upon it, because the block cannot be removed from the mold until the wet mixture has set, and the cementitious material will not enter the pores of the block except under pressure.

In the present method the block is first formed in the usual manner by mixing sand and cement in a slightly moist or semi-dry state, and pressing or tamping it in a mold. Water is next applied, as by sprinkling, to the face of the block in sufficient quantity to enter the pores or interstices of the block, and then a powder of cement, either neat or mixed with sand or other ingredients, is sifted upon the water, which is at the same time agitated so as thoroughly to saturate the face of the block. The water will thus enter the pores or voids of the block to the required depth, and carry with it the cement powder sifted thereon. The water serves both to carry the cement into the pores and to cause crystallization of the added cement, and no external pressure will be required to force the water and cement into the block. The face of the block is then stippled or otherwise treated as may be desired, and the block removed from the machine and cured in the usual manner.

It will be understood that the main portion of the block remains in a comparatively dry state so that it can be immediately removed from the mold, and

all its faces, except those exposed to the water and

(26) [240]

crystallizing mixture, will be porous so that the mortar will adhere to them, while the outer face will be proof against the absorption of water because all of the interstices and pores have been filled with crystallized cement.

The word "block" is here used generically to include a brick, tile or other mass of any shape or size, as well as a "block" technically so called.

I claim as my invention:

1. The herein described method of forming a water-proof faced cement block, which consists in first forming the block of suitable material in a semi-dry state, applying water to the face of the block in a sufficient quantity to enter the pores or interstices thereof, and adding cement to the water, whereby the cement will enter the pores or interstices with the water.

2. The herein described method of forming a water-proof faced cement block which consists in first forming the block by mixing sand and cement in a semi-dry state and molding it, then applying water to the face of the block, then spreading cement upon the water and agitating the mixture to carry the cement into the interstices of the block to the required depth.

IN TESTIMONY WHEREOF I affix my signature in presence of two witnesses.

DAVID F. SHOPE.

Witnesses:

EDWIN R. HOLCOMBE.

H. SMITH. [241]

25/1.

R. 1909.

CONTENTS:

Print ————.

1. Application 1 Papers—One.
2. Rej. Jan. 14, 1910.
3. Amend A. April 11, 1910.
4. Rej. Apr. 19, 1910.
5. Asso. Power of Atty. June 14, 1910.
6. Amendt. B, June 14, 1910.

Notice of Suit July 9, '23.

TITLE:

Method of Waterproofing Cement Blocks.

Oct. 23, 1923.

#167405/23.

Filed April 4, 1924. G. M. Marsh, Clerk.

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(27) [241A]

DEFENDANT'S EXHIBIT "F."

UNITED STATES PATENT OFFICE.

EDWARD GOODE, OF BARTOW, FLORIDA, ASSIGNOR OF ONE-HALF TO THOMAS A. GOODE, OF SAME PLACE.

ARTIFICIAL STONE

SPECIFICATION forming part of Letters Patent No. 518,239, dated April 17, 1894.

Application filed August 30, 1893. Serial No. 484,390. (No specimens.)

To all whom it may concern:

Be it known that I, EDWARD GOODE, a citizen of the United States, residing at Bartow, in the county of Polk and State of Florida, have invented certain new and useful Improvements in Artificial Stone for Monuments, &c.; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention consists of an artificial stone especially adapted for use in the making of monuments,—and in the process of making the same. For the main portion, or body of the stone I employ clean white sand, or marble dust, entirely freed from soil or other foreign substance, and pure Portland cement, the proportions of these ingredients being from one to two parts of sand to one part of the cement. These ingredients I thoroughly mix in a dry condition, and then add thereto sufficient water to make a stiff mortar, which when of the desired and of a uniform consistency, is placed in the mold which gives the desired shape to the article being made. When the mold is full, and the surface is properly dressed to give the desired smoothness of surface, it is allowed to stand for a few minutes so that the water will gather upon the surface. I then sift pure cement upon the surface, which may be smoothed if desired after the cement has been placed thereon, and then allow it to stand until the water again collects, after which cement is again evenly and uniformly sprinkled upon the surface, and this operation is repeated several times. The mold containing the above described composition is now left for a suitable length of time, usually for about twenty-four hours, to harden. When sufficiently hard, but while yet moist, I saturate the surface with a strong solution of lime-water, care being taken to remove, by a soft rag or sponge, any surplus lime which may collect upon the surface. This saturation is repeated as often as may be necessary during two or three days and until the surface portion of the artificial stone becomes thoroughly saturated with the lime-water.

It will be observed that I do not use lime in the composition of the body-portion of the artificial stone, as I have found that this is objectionable for the reason that when lime is used the body of the stone is caused to crack by reason of the shrinkage of the lime in the process of drying, whereas when the body of the stone is made only of sand and pure cement, as described, this cracking is avoided, and a more uniform, solid and durable stone is the result. It will also be noticed that upon the body-portion of the stone is formed a skin or surface portion of pure cement. This I find to be very advantageous in that it makes a surface of great hardness, and to which can be imparted a smoothness of finish which cannot be obtained with the composition which makes up the body of the stone. A stone having the surface thus prepared is especially adapted to receive clean or clearly cut impressions from letters or other designs which may be laid thereon, and therefore is especially useful in the making of monuments upon which it is desired to place inscriptions.

In order to make the impressions in the surface, I use dies or type shaped to form letters, figures or other desired designs, and place them upon the surface of the stone, and cause them to be embedded therein to the desired extent by slight pressure.

I find that by treating the surface of the artificial stone, produced as above described, and while it is still moist, with lime-water, a marble-like effect is produced which adds much to the appearance of the stone. The whiteness which is imparted to the stone by the lime contained in the lime-water is of a lasting quality and is not affected by exposure to the weather.

In the making of monuments or other articles from the composition which I have described, I ordinarily prefer to fill the molds about half full with the composition of sand and cement, and then place in the molds iron rods, which being embedded in the article, give strength thereto without impairing its appearance.

Any suitable tools may be employed for the finishing of the surface of the stone, both be-

fore the surface coating is applied thereto, and after such surface coating has been placed thereon.

It will be understood that a desirable artificial stone is produced without the treating of the surface with the lime-water, although I prefer this step as it improves the appearance of the finished article.

Having thus described my invention, what I claim, and desire to secure by Letters Patent, is—

1. An artificial stone having a body portion of sand and hydraulic cement, and a skin of pure cement impregnated with lime, whereby the skin portion of the stone has a permanent, white, marble-like appearance, substantially as set forth.

2. The herein described process of making artificial stone, which consists in mixing together pure sand and Portland cement with sufficient water to make a thick mortar, then molding this composition, then forming a surface by sifting or placing thereon dry hydraulic cement, and then finishing the said surface, substantially as set forth.

3. The herein described process of making artificial stone, which consists in forming a body of a mixture of sand, hydraulic cement and water, then applying thereto a surface or skin of pure hydraulic cement, allowing the stone thus formed to harden, and then treating the surface with lime-water, while the stone is yet moist, substantially as set forth.

In testimony whereof I affix my signature in presence of two witnesses.

EDWARD GOODE.

Witnesses:
FRANCIS A. WOLFF,
S. M. TATUM.

DEFENDANT'S EXHIBIT "G."

(No Model.)

A. FEDERICI.

BUILDING BLOCK.

No. 527,416. Patented Oct. 16, 1894.

Fig 1

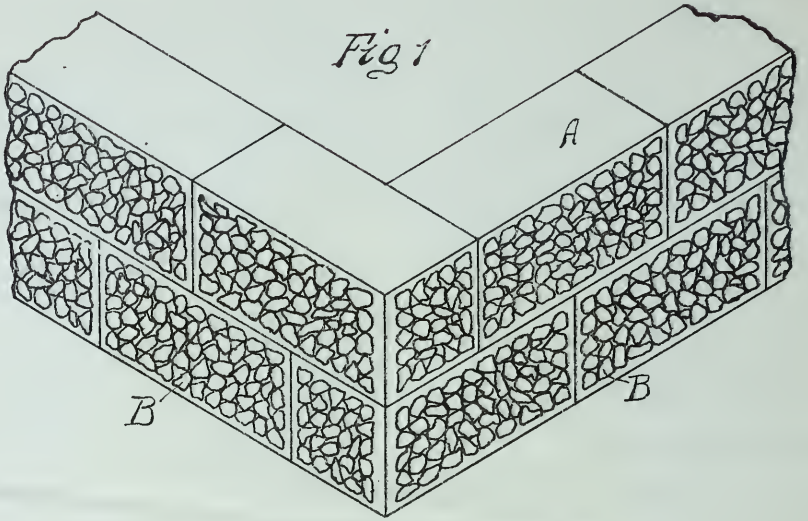


Fig 2

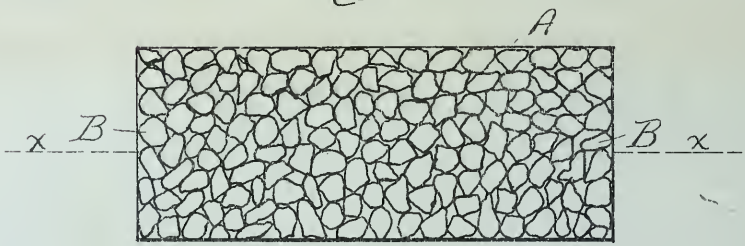
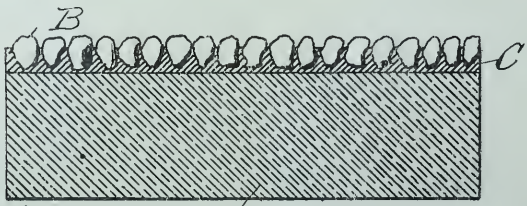


Fig 3



Witnesses
Alfred B. Watson
William M Drew

Inventor
Antonio Federici
By John F. Kerr
Attorney

UNITED STATES PATENT OFFICE.

ANTONIO FEDERICI, OF PATERSON, NEW JERSEY.

BUILDING-BLOCK.

SPECIFICATION forming part of Letters Patent No. 527,416, dated October 16, 1894.

Application filed March 30, 1893. Serial No. 468,261. (No model.)

To all whom it may concern:

Be it known that I, ANTONIO FEDERICI, a citizen of the United States, residing at Paterson, in the county of Passaic and State of New Jersey, have invented certain new and useful Improvements in Building-Blocks; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

The object of my invention is to provide an artificial stone for building purposes which shall be durable and ornamental and which can be cheaply and easily manufactured.

The invention consists of a stone comprising the following elements: cement, sand, and pebbles, arranged as hereinafter described and shown in the accompanying drawings.

In the drawings Figure 1 represents the corner of a wall built with my artificial stone. Fig. 2 represents the face of a stone showing the pebbles. Fig. 3 is a view of a section of my artificial stone through the line X—X, Fig. 2.

—A— represents the stone; —B— the pebbles; —C— a layer of pure cement, and —D— represents the other portion of the stone which is composed of cement and sand.

The portion —D— of the stone is composed of Portland cement and the best sharp sand, which I mix in suitable proportions and make or mold in any suitable size or shape. I then prepare some pure Portland cement and spread a layer thereof upon that exposed surface of the portion —D— which is to form the face of the stone. While the material is yet plastic, assorted pebbles, B, are partially sunk into the central part of the face or faces of the stone, a margin on said face being left unpebbled as clearly shown in Fig. 1, although it is obvious that the whole surface, as shown in Figs. 2 and 3, may be covered without departing from the spirit of my invention. The block is then left until it hardens.

Fig. 3 shows the composition of my artificial stone, —D— being the portion composed of cement and hard sand, —C— being the layer of pure cement and —B— being the pebbles partially embedded therein.

When the stone is thoroughly dry and hardened the pebbles —B— cannot be extracted from the layer of cement —C— without breaking them.

I propose to use my artificial stone for building purposes for which it is peculiarly adapted, as the action of the weather produces no ill effect upon it; but by bleaching the pebbles rather enhances its beauty.

I am aware that in the construction of pavements, roadways, and walking surfaces, that gravel, sand and cement have been used for uniting the blocks or cobble-stones and that in some instances materials distinguished for their sharp, hard and angular and gritty character have been used in an artificial stone or a concrete walking surface, in order to prevent slipping, &c., and in other cases where metallic gratings have been combined with an under or body of cement or concrete; but I am not aware that a building block has ever been constructed with exposed surfaces consisting of very small pebbles partially embedded in a layer of pure cement.

I am also aware of a building block formed of a cement or concrete body with pieces of tiling, glass or other hard substances embedded therein flush with the surface of the sand; but in my stone the pebbles are very small and are only partially embedded in the layer of cement upon the exposed surfaces thereof.

I am also aware that it is not new to form a block for paving streets by covering a layer of bricks with cement and embedding therein a surface layer of cobble-stones of suitable size for resisting the wear incident to heavy traffic.

As I do not confine myself to pebbles of any particular color it is obvious that in ornamental trimmings on buildings, the arches, sills or cornices may be of variegated colors; and as I do not confine myself to any special shape, my artificial stone may be used in all sorts of mason work for walls, dwellings or other buildings, in all cases the faces or exposed portions of my stone being constructed

substantially as above specified with pebbles, partially embedded in a layer of pure cement on said faces.

With the above description of my invention, what I claim is—

A new article of manufacture consisting of a building block, the body portion of which is composed of a comparatively coarse material, the face or exposed surface being composed of finer material, such as Portland cement, into the surface of which pebbles, of substantially uniform size, are partially embedded, substantially as and for the purpose set forth.

In testimony whereof I affix my signature in presence of two witnesses.

ANTONIO FEDERICI.

Witnesses:
G. J. KERR,
W. M. DREW.

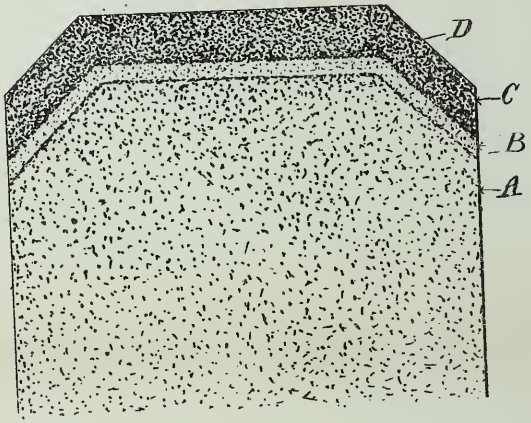
DEFENDANT'S EXHIBIT "H."

(No Model.)

W. J. HADDOCK.

PROCESS OF CONSTRUCTING HYDRAULIC CEMENT BLOCKS OR ASHLERS.

No. 531,842. Patented Jan. 1, 1895.



Witnesses
C. E. Burdine.
G. Arthur Pennington.

Wm J. Haddock, Inventor
by Crosby & Gorian
Attorneys

UNITED STATES PATENT OFFICE.

WILLIAM J. HADDOCK, OF IOWA CITY, IOWA.

PROCESS OF CONSTRUCTING HYDRAULIC CEMENT BLOCKS OR ASHLERS.

SPECIFICATION forming part of Letters Patent No. 531,842, dated January 1, 1895.

Application filed May 28, 1894. Serial No. 512,689. (No specimens.)

To all whom it may concern:

Be it known that I, WILLIAM J. HADDOCK, a citizen of the United States, residing at Iowa City, in the county of Johnson and State of Iowa, have invented a certain new and useful Process of Constructing Hydraulic Cement Blocks or Ashlers; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to a new and useful process of constructing hydraulic cement blocks or ashlers for the purpose of constructing or veneering walls of buildings, and it consists in the several steps hereinafter referred to and definitely pointed out in the claims.

Heretofore in the construction of cement blocks or ashlers for building purposes it has been deemed impossible to form the same by using natural hydraulic cements in conjunction with artificial or Portland cement and at the same time secure the requisite compactness and strength. It is further a well-known fact that, as heretofore made, of hydraulic cement, blocks where exposed to the elements will absorb a large amount of water, making the structure composed of them wet and cold.

The aim and purpose of this invention is to overcome such defects incident to the construction of hydraulic cement blocks or ashlers adapted for use in building or veneering purposes, by combining natural and artificial cement in one and the same block, but in different strata so that the artificial cement will be the surface for exposure, the natural cement forming the protected part of the block, thus combining great strength and economy.

In the accompanying drawing I have shown a cross-section of a preferred form of block as made by my method.

In said drawing A represents the protected part or base of the block formed of natural cement and sand.

B represents the water-proof stratum of hydraulic cement free from sand, and C represents the outer stratum or facing of the block, composed essentially of artificial or Portland cement and fine sand.

The outer corners of the blocks are chamfered as at D, each stratum being likewise constructed so that the outer stratum C is extended back partly over the sides of the stratum A. By this means when the block is used for building purposes or for building walls the outer face will simulate that of cut stone while the edges of the inner stratum A will be fully protected. By this means I am also enabled to economize in the use of artificial cement.

The method I employ in constructing these blocks is as follows:—I first take a suitable mold of the proper shape and size and of strength sufficient to withstand considerable internal pressure. The block or ashler is then built up, starting at the top first, that is to say, I first place in the bottom of the mold a stratum of Portland cement mixed with sand in the proportion of substantially one volume of cement to two volumes of sand. This amount, however, may be varied. This mass of cement and sand is thoroughly mixed and then moistened by incorporating therewith a sufficient amount of water to moisten each particle of sand and cement, leaving the mass in a moist rather than wet condition. I employ the term "moist" and wish it understood as designating a damp condition rather than a condition approximating a fluid or wet condition. The mass so treated is then thoroughly tamped and compressed, the "moist" condition of the mass preventing the water from oozing out as would be the case were the mixture over-saturated with the water. The material thus tamped becomes solid and firm. In so tamping and compressing the inner section of the block is first treated to form the concave under face as represented in the drawing. I next sift or spread on the exposed face of the compressed material a coating of pure cement, either natural or artificial. I then moisten this coating. The amount of material used in this step is sufficient to form a complete coating or covering and it constitutes a stratum impervious to water. I next take a mixture of natural cement and sand and incorporate therein a sufficient amount of water to moisten each grain thereof so that the mass will compact easily and thoroughly without the water rising or exuding. The proportions of sand and cement are one volume of cement to two volumes of sand. This amount may, however, be slightly varied. The material so mixed is then placed in the

mold over the strata of pure cement and thorough and absolute compression is placed on all parts thereof to form a solid and firm block. The mold is now inverted on a level plank or plain surface and is then removed from the block which will retain its shape and the cement is allowed to set.

It is evident that slight variations in the method described and in the article shown can be made without departing from the nature and principle of my invention.

Having thus described the invention, what is claimed as new, and desired to be secured by Letters Patent, is—

1. The method of forming building blocks or ashlers consisting in placing a "moist" mass of artificial cement and sand into the bottom of a suitable mold, thoroughly compressing the same to form a compact outer stratum or facing, coating the exposed face of the stratum with a stratum of pure hydraulic cement, placing a mass of natural hydraulic cement and sand in a mixed moist condition onto the stratum of pure cement, thoroughly compressing the same and finally removing the block from the mold and allowing the cement to set, substantially as described.

2. The method of forming building blocks or ashlers, consisting in placing a moist mass of cement and sand into a suitable mold, compressing the same, applying a coating of pure cement to the exposed face of the material in the mold, placing a moist mass of hydraulic cement and sand on the coating, compressing the same, and finally removing the block from the mold, substantially as described.

In testimony whereof I affix my signature in presence of two witnesses.

WILLIAM J. HADDOCK.

Witnesses:

FRANK T. BREENE,

GEORGE TOMLIN.

DEFENDANT'S EXHIBIT "L."

No. 703,644. Patented July 1, 1902.

E. DAVIES.

METHOD OF MAKING CEMENT FENCE POSTS.

(Application filed May 29, 1901.)

(No Model.)

Fig. 1.

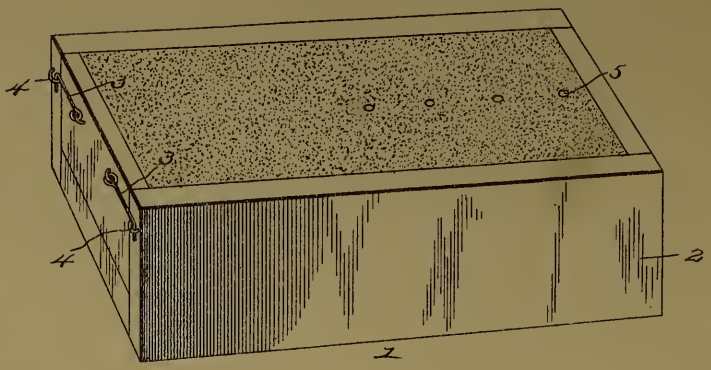
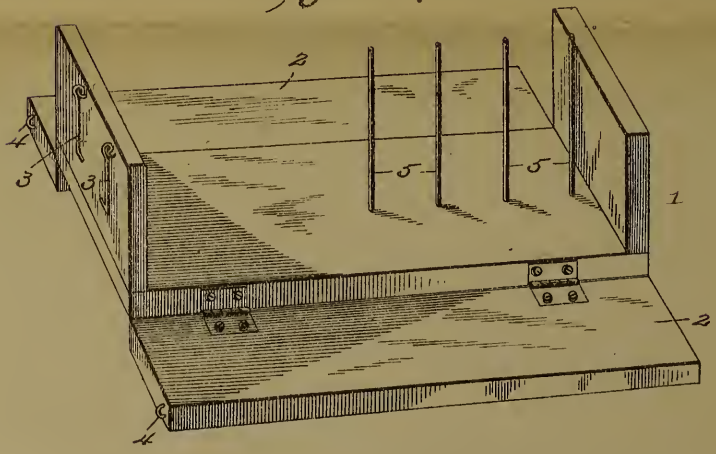


Fig. 2.



E. Davies, Inventor.

By E. G. Siggers.

Attorney.

Witnesses.
L. Chesser,
R. M. Elliott.

UNITED STATES PATENT OFFICE.

EDWARD DAVIES, OF READING, MICHIGAN.

METHOD OF MAKING CEMENT FENCE-POSTS.

SPECIFICATION forming part of Letters Patent No. 703,644, dated July 1, 1902.

Application filed May 29, 1901. Serial No. 62,385. (No specimens.)

To all whom it may concern:

Be it known that I, EDWARD DAVIES, a citizen of the United States, residing at Reading, in the county of Hillsdale and State of Michigan, have invented a new and useful Method of Making Cement Fence-Posts, of which the following is a specification.

This invention relates to a method of making cement fence-posts.

The object of the invention is in a certain, ready, and thoroughly practical manner and without adding to the expense of the production of the post to preclude entrance of moisture to the post, whereby hardening will be accelerated and destruction due to disintegration from entrance of moisture will be effectively obviated.

A method heretofore commonly practiced for shielding the post from the action of moisture has been to dust the post while in the mold with cement, and this, by absorbing moisture from the post, will become associated therewith and form a film merely on one side thereof, or at most on a side, the edges, and two ends, thus leaving the remaining side unprotected. While a fence-post treated in this manner will be effective for use in climates where there is but little moisture and but little frost, yet in higher latitudes it would be practically inoperative for effective use, for the reason that if moisture enters or is taken up by the post and this moisture becomes congealed by cold, disintegration of the post is inevitable.

Under the procedure set forth in my invention I provide a protecting envelop or film that entirely covers every particle of the exposed surface of the post, so that in the event of its being set up before the interior is thoroughly dry it will still be protected against entrance of moisture, thereby permitting it in time to set and become perfectly hard and firm.

As demonstrating one way of carrying my invention into effect, I have exhibited in the accompanying drawings a form of mold that may be employed in carrying the invention into effect, it being understood that the invention is not to be restricted to any particular shape of post or any particular shape of mold, as it is equally well adapted to posts of any contour that may be desired, and in the drawings—

Figure 1 is a view in perspective exhibiting the mold with the sides folded up, displaying the post in position therein. Fig. 2 is a similar view with the sides turned down to permit the removal of the posts.

In carrying my invention into effect I fill the mold 1, which may be, as before stated, of any preferred shape, with a mass of damp sand, gravel, and cement mixed in suitable proportions to produce the best results, and this composition is pounded into the mold to cause a close adherence of the molecules of the composition, the sides 2 of the mold being closed up, as shown in Fig. 1, and held in this position by hooks 3 engaging staples 4 on the sides. To present the proper openings or holes through which the wires are passed for securing the fence-wires in position against the post, I associate with the mold a plurality of bars of metal 5, these to be of the required diameter to present the openings desired. When the composition has become sufficiently set to permit of the post being handled without danger of breaking and before it has become finally set, the sides of the mold are let down and the post is removed from the mold and dipped into a bath of pure liquid Portland cement of such fluidity as that it will run smoothly and evenly over the entire exposed surfaces of the post and fill all cracks, crevices, and interstices, except the openings left by the bars 5, the walls of which openings are likewise coated with a film of the cement. By reason of the fact that the cement is in liquid form it will rapidly dry and thereby present upon all of the exposed surfaces of the post an envelop or film of moisture-proof material. Should it be found that one dipping of the post is not sufficient, although it generally will be, it may be dipped one or more times, the point being in either event to effect a perfect closure of any opening that may exist upon the exposed surfaces of the post. The post is then set aside until the coating shall have become thoroughly dried, and the posts may then be set in place for use. When so set up, it will be immaterial to what moisture it is exposed, as such moisture cannot gain entrance to the interior of

the post, and in time the post will become thoroughly set and, as will be readily understood, increase in hardness with age.

Heretofore fence-posts have been given a surface coating by applying the surfacing material by means of a brush or otherwise smearing said material upon the post. This is a laborious operation, requiring considerable time and resulting in an unequal and unsatisfactory surfacing of the post. In view of this disadvantage it is the essential object of my invention to secure a uniform protective surfacing in an expeditious and thoroughly practical manner by dipping the post in a bath of liquid cement, which operation may be quickly carried out and results in a uniform coating without requiring the employment of skilled labor and also without particular attention upon the part of the operator.

It will be seen from the foregoing description that the method herein described will not add any material expense to the production of the post, and by reason of the fact that the life of the post will be indefinitely increased its use will be highly beneficial in the manufacture of posts of this character, rendering them, in effect, indestructible.

From the foregoing it is thought that the construction, operation, and many advantages of the herein-described invention will be apparent to those skilled in the art without further description, and it will be understood that various changes in the size, shape, proportion, and minor details of construction may be resorted to without departing from the spirit or sacrificing any of the advantages of the invention.

What I claim is—

The herein-described method of making fence-posts, consisting in placing plastic material in a mold, permitting the same to remain therein until it has become hard enough to handle without breaking, then removing the molded material from the mold before it has become entirely set, and finally dipping the article one or more times in a bath of liquid hydraulic cement.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

EDWARD DAVIES.

Witnesses:
A. L. KINNEY,
F. R. ROBSON.

DEFENDANT'S EXHIBIT "V."

A. O. THOMAS.

PROCESS OF MOLDING ARTIFICIAL STONE BUILDING BLOCKS.

APPLICATION FILED OCT. 12, 1907.

958,194. Patented May 17, 1910.

FIG. 1.

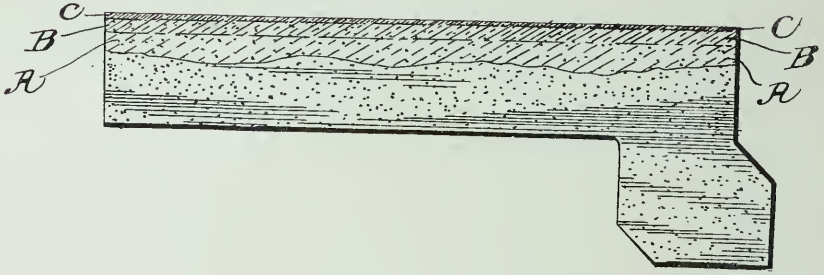
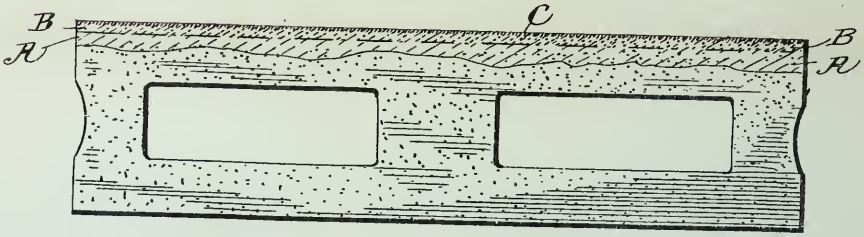


FIG. 2.



WITNESSES

Chas. K. Davis.

Myron A. Clear

INVENTOR

Augustus O. Thomas.

by P. L. Parker

Attorney

UNITED STATES PATENT OFFICE.

AUGUSTUS O. THOMAS, OF KEARNEY, NEBRASKA.

PROCESS OF MOLDING ARTIFICIAL-STONE BUILDING-BLOCKS.

958,194. Specification of Letters Patent. Patented May 17, 1910.

Application filed October 12, 1907. Serial No. 397,221.

To all whom it may concern:

Be it known that I, AUGUSTUS O. THOMAS, a citizen of the United States, residing at Kearney, in the county of Buffalo and State of Nebraska, have invented certain new and useful Improvements in Processes of Molding Artificial-Stone Building-Blocks, of which the following is a specification.

My invention relates to a new and improved process of molding artificial stone building blocks and the like, and particularly contemplates the provision of a process whereby the block may be molded and handled at once, and whereby its usefulness and strength will be equal to that of a wet mold block which could not be handled before twenty-five or thirty-six hours.

My invention further and specifically resides in the following process of molding artificial stone building blocks as will be hereinafter particularly described with reference to the accompanying drawings forming a part of this specification, in which—

Figure 1 is a plan view partly in section of a building block constructed according to my process, and Fig. 2 is a similar view of a modified form of building block constructed in accordance with my process.

According to my invention I aim to provide a building block comprising a body A composed of coarse aggregates and a comparatively small percentage of moisture, being thus made in low plasticity which gives the opportunity of handling the product immediately. The face B of this block comprises a mixture of finely divided aggregates formed in a state of high plasticity, that is with moisture sufficient to render the same into a thoroughly plastic mass. Making the body A of the block of low plasticity and the face B of a high plasticity, gives an opportunity of working the material and at the same time bringing out the virtues of the cement and making the block of sufficient moisture in the mixture, to produce perfect crystallization and to produce stone instead of merely cemented sand and gravel. This block is floated with some pressure which closes the pores in the cement to further the opportunity of working the material properly and the surface is preferably sifted over with finely crushed marble or stone C properly mixed with Portland cement to produce a beautifying crystallized effect.

The addition of the powdered marble or other stone mixed with cement serves the immediate purpose of forming a very thin outside layer on the face of high plasticity preventing, by a thickening or stiffening action, the surface tendency to run, due to the oozing of the water to the surface, and thereby enables the block to be handled and used considerably earlier than would be otherwise possible. The powder further serves to prevent the escape of moisture from the face of high plasticity either by drip or evaporation.

When a mixture is made very dry as heretofore in molding blocks, it is hard to get sufficient water to produce perfect crystallization, while the facing of high plasticity provided by my process uses all the water that is necessary for perfect crystallization.

Having thus fully described my invention, I claim:

An improvement in making building blocks, which consists in forming the body portion thereof, of a mixture of coarse aggregates made in low plasticity, in forming a facing for the outer side of said body portion of a mixture of finely divided aggregates in high plasticity for furnishing sufficient moisture for the crystallization of said body portion, and in forming on the surface of said facing a thin layer in low plasticity by sifting on such surface powdered stone and cement to stiffen the surface of the facing and prevent the escape of moisture therefrom, substantially as described.

In testimony whereof I affix my signature in presence of two witnesses.

AUGUSTUS O. THOMAS.

Witnesses:
S. L. GARRETT,
VIRGINIA MERCER.

DEFENDANT'S EXHIBIT "W."

No. 751,089. PATENTED FEB. 2, 1904.

F. A. MALETTE.

METHOD OF MAKING CONCRETE BUILDING BLOCKS.

APPLICATION FILED APR. 17, 1903.

NO MODEL. 3 SHEETS—SHEET 1.

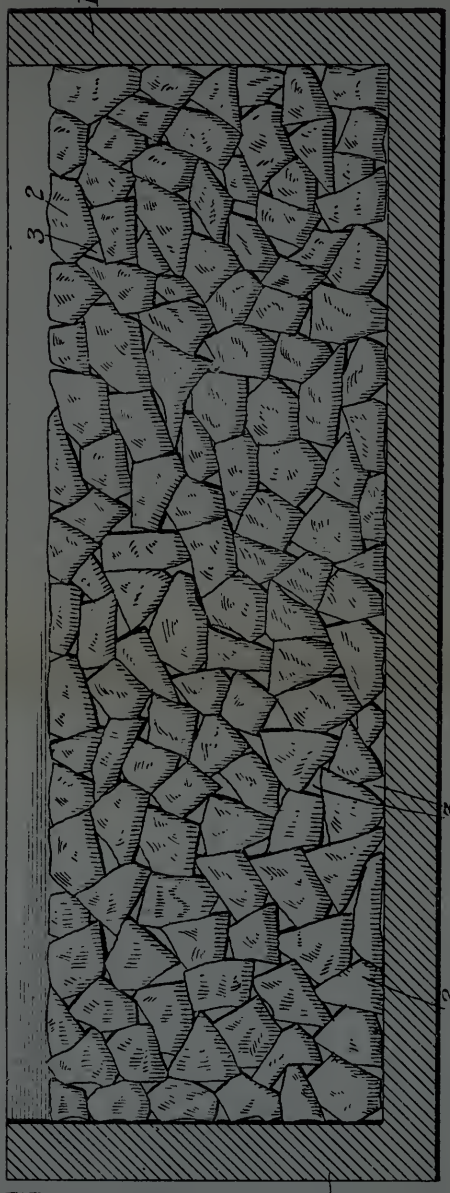


Fig. 1.

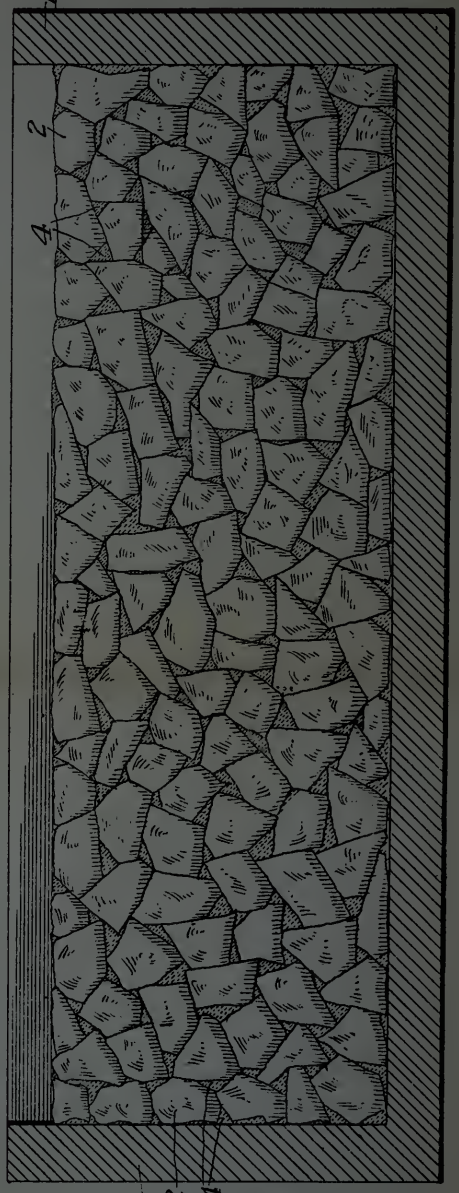


Fig. 2.

Witnesses:
C. B. Hamburger
H. L. Snyder

Inventor:
Frederick A. Malette.
by Thurston & Bridgeman
Atty.

No. 751,089. PATENTED FEB. 2, 1904.

F. A. MALETTE.

METHOD OF MAKING CONCRETE BUILDING BLOCKS.

APPLICATION FILED APR. 17, 1903.

NO MODEL. 3 SHEETS—SHEET 2.

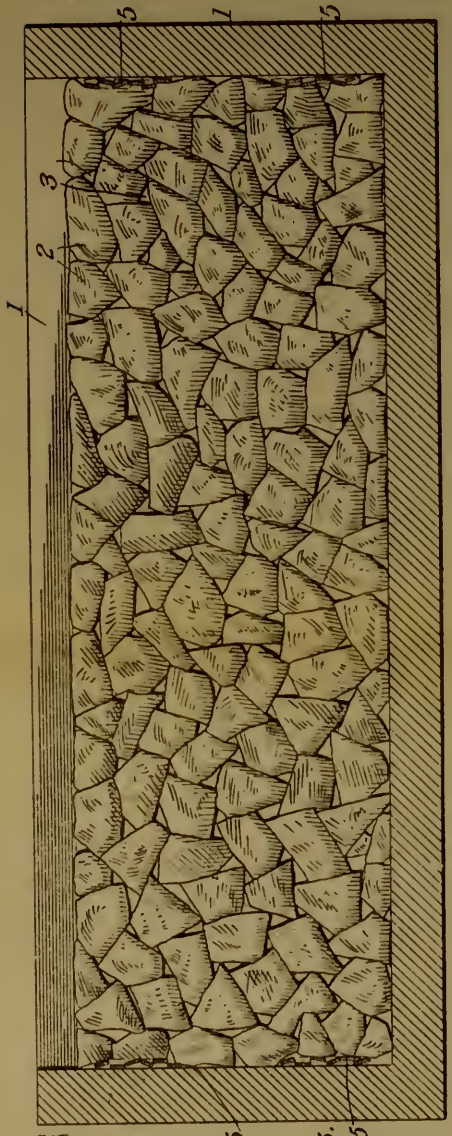


Fig. 3.

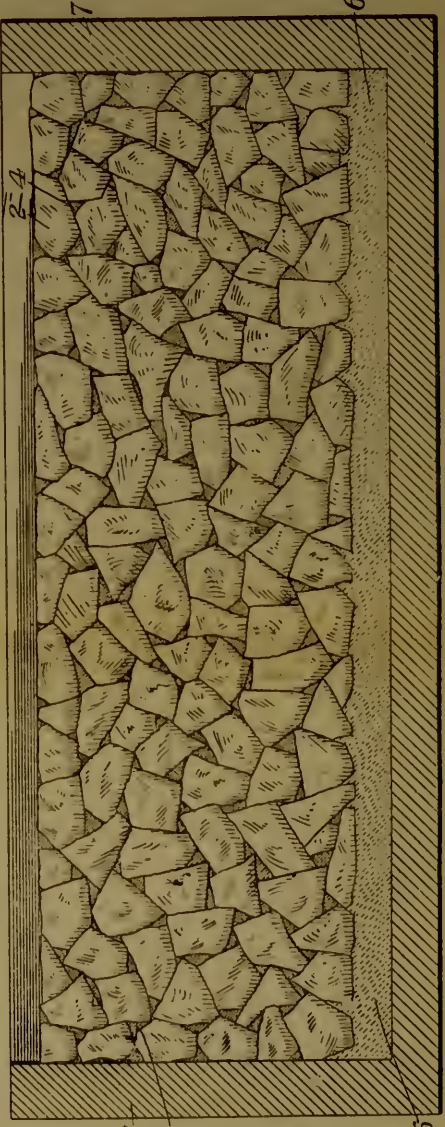


Fig. 4.

Witnesses:
C. G. Harbarger
H. L. Snyder

Inventor:
Frederick A. Malette.
by Wm. Stackbridge
Atty.

No. 751,089. PATENTED FEB. 2, 1904.

F. A. MALETTE.

METHOD OF MAKING CONCRETE BUILDING BLOCKS.

APPLICATION FILED APR. 17, 1903.

NO MODEL. 3 SHEETS—SHEET 3.

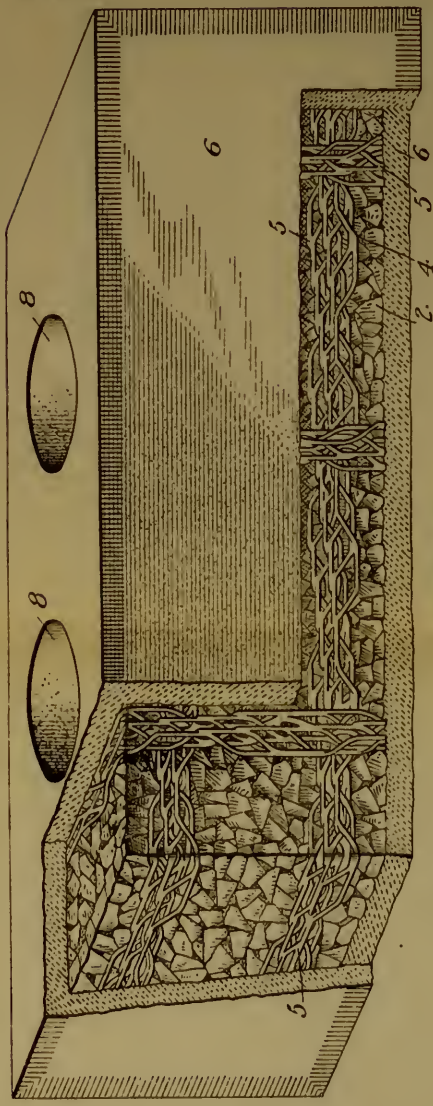


Fig. 5.

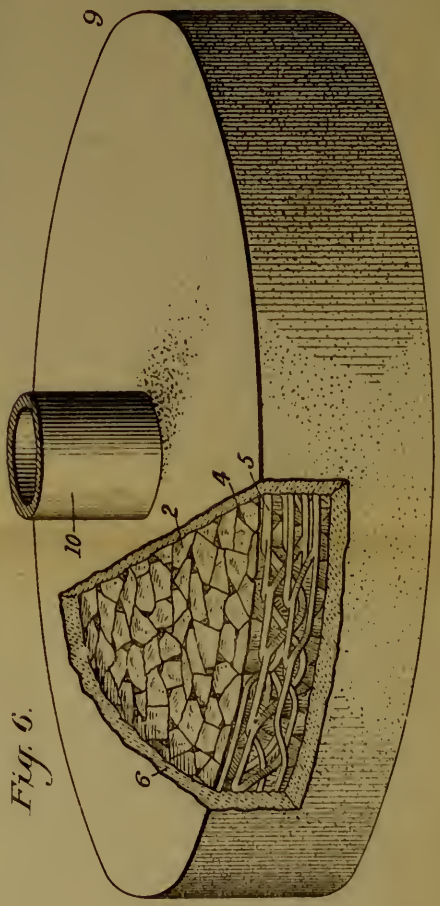


Fig. 6.

Witnesses:
C. F. Harbinger
A. L. Snyder

Inventor:
Frederick A. Malette
by Wm. Stockbridge
Atty.

No. 751,089. Patented February 2, 1904.

UNITED STATES PATENT OFFICE.

FREDERICK A. MALETTE, OF GENEVA, NEW YORK.

METHOD OF MAKING CONCRETE BUILDING-BLOCKS.

SPECIFICATION forming part of Letters Patent No. 751,089, dated February 2, 1904.

Application filed April 17, 1903. Serial No. 153,040. No model.

To all whom it may concern:

Be it known that I, FREDERICK A. MALETTE, a citizen of the United States, residing at Geneva, New York, have invented a new and useful Method of Making Concrete Building-Blocks, of which the following is a specification.

My invention is designed for the production of an improved concrete building-block or the like having all the features of merit of the ordinary artificial building block or stone, with the advantage thereover of greater strength, rigidity, and strain-resisting power and the further advantage that it may be more easily and cheaply constructed.

The invention consists in the method of making the bulding-block.

In carrying out the invention crushed or broken stone is covered with a coating of mortar, preferably composed of sand and hydraulic cement or of sand, hydraulic cement, and stone dust or screenings. This coating is applied to the surfaces of all the individual stones. Afterward the crushed stone thus coated is placed in a mold, and by compression, either by pounding or otherwise, the stones are bonded together, the bonding being effected by the compression to which the stones are subjected independent of the action of the cement. By thus bonding the stones together the spaces or voids between them are not filled. After the bonding a suitable mortar of thin consistency—composed, for example, of hydraulic cement and sand or stone dust, or both—is poured upon the bonded mass of stone and allowed to flow down and fill a considerable portion of the spaces between the stones. The voids are thus filled after the bonding of the stone instead of at the same time, as is done according to the usual method of mixing concrete when the aggregate and mastic are combined in the same operation. The bonding of the large stones themselves in the first operation makes the completed work much stronger than when dependence is placed entirely upon the cement and mortar. This is due to the fact that the original or natural strength of the individual stones is utilized, that the same are enabled to lie in close contact with each other at their adjacent points, and that they are maintained in such condition by the pressure to which they are subjected. Where a large block is to be made, the filling of the voids with thin mortar must be effected during the operation of building up the block, for the reason that with a very thick or high block the thin mortar will not flow from the top to the bottom, so as to fill the voids or spaces between the stones. In making a large block I proceed in the same manner as above described, except that a larger mold is employed, which is first only partially filled with the broken stone coated with mortar. The mass of stone is subjected to compression, as before, by pounding or in any other suitable way, and the voids or spaces between the stones are afterward filled by pouring thereon a mortar of thin consistency, preferably composed of hydraulic cement and sand or stone dust or screenings. When this has been completed, more of the broken stone coated with mortar is placed in the same mold on top of the mass previously treated and subjected to compression, as before. Afterward the voids or spaces between the stones of the upper mass are filled in the same manner as above described. These steps are repeated until a block of the proper thickness has been completed. For securing additional strength or reinforcement, as in the case of a large block or pillar, expanded metal or its equivalent may be embedded in the block during the course of its construction. This is done by introducing the expanded metal into the mold before the mass of mortar-coated stones is placed therein and proceeding in the manner above described in the construction of the block. When the mortar with which the stones are originally coated and that with which the voids or spaces between the stones are filled has become set, the expanded metal will be interlocked and interwoven with the mass of stone along the outer surface thereof and will serve to impart greater stiffness and rigidity thereto. The use of the expanded metal in the construction of the building-block has the further advantage of providing projections to which a surface coating of mortar may secure itself when the same is applied in the completion of the block. The expanded metal may of course be applied in other ways

than as described. For example, it may be connected with the body of the block after the latter has been completed. Furthermore, wire-cloth or other suitable material may be employed as a substitute for the expanded metal.

When the building-block constructed according to my improved method is to be used in exposed places, a surface coating will be applied to those faces thereof which are outermost and are exposed to view. This surface coating is made of mortar composed, for example, of hydraulic cement and sand or stone dust or screenings, the same being applied while in a plastic condition to the surface or surfaces of the block which are to receive the same and carefully rubbed down and smoothed out, so as to give the same a finished appearance and to render the surface of the block waterproof. It is best to apply this coating to the surface or surfaces of the block by the application of pressure in order to cause the mortar of which the surface coating is made to penetrate the spaces between the stones of which the body of the block is made at the surface thereof. In the actual construction of the block it is intended to apply the surface coating to the body, which is composed of the broken stones bonded together, either before the voids between the stones at the surface of the block have been filled with the thin mortar which is intended to fill the same or before said thin mortar has become hardened or set. A tight gripping action between the surface coating and the body of the block may thus be obtained.

The block may be made hollow, if desired, the only thing necessary to effect this result being to introduce one or more wooden or other cores into the mold prior to the introduction and compression of the mortar-coated stones therein, building up the block around said core or cores and afterward removing the same.

In the construction of pillars it is my purpose to make the same in sections, which are preferably tapering in form and are circular, elliptical, or other suitable shape in cross-section. Each of said sections will preferably be formed with a circular or other suitable opening therein at its center, so that in building up a pillar from the different sections the latter may be strung upon a metal tube or upright which extends through the openings therein.

In order that my invention may be the more readily understood, I have illustrated my improved block in the accompanying drawings in various stages of its completion.

Figure 1 is a sectional view of one of the molds employed, showing a block in its first stage—that is, after the mortar-covered stones have been introduced into the mold and bonded together by compression, but before the voids or spaces between the stones have been filled. Fig. 2 is a similar view showing a block in its mold after the voids or spaces between the stones have been filled. Fig. 3 is similar view showing a block built up in its mold with the expanded-metal reinforce. Fig. 4 is a similar view showing one means of applying a surface coating to the body of the block by the application of pressure. Fig. 5 is a perspective view, partly broken away, of a completed block having openings formed therein and provided with an expanded-metal reinforce; and Fig. 6 is a similar view of one of the block-sections employed in the building up or construction of a pillar, showing a metallic upright extending through the opening at the center thereof.

Like reference-numerals indicate like parts in the different views.

The mold 1 may of course be of any suitable shape, the particular shape being determined by the form which it is intended the completed block shall assume. Into this mold, as shown in Fig. 1 of the drawings, is placed a mass of mortar-coated stones 2, which while in the mold are subjected to compression without filling the voids, the said voids being indicated in Fig. 1 of the drawings by the numeral 3. In the same mold after the bonding by compression the mass of stones has poured thereon a layer of motor of thin consistency, which flows down through the spaces between the stones and fills or partially fills said spaces, as indicated at 4 in Fig. 2 of the drawings. When the block is to be supplied with a reinforce 5 of expanded metal, wire-cloth, or the like, the latter is introducee into the mold, as shown in Fig. 3 of the drawings, and the mortar-covered stones 2 compressed and bonded within it. The metallic reinforce may, however, be otherwise applied to the body of the block, if desired.

One means of applying the surface coating 6 to the block is illustrated in Fig. 4 of the drawings. The mass of mortar which is intended to form the surface coating of the block is placed in the bottom of a mold 7 while in a plastic condition, and a block consisting of the bonded mass of crushed or broken stones is placed down upon the mass which is to form the coating and pressure applied from above. The mortar of the coating is thus caused to penetrate the spaces or voids between the stones at the surface and when it hardens adheres closely thereto by being locked in place. As heretofore stated, it is preferred to apply the the surface coating 6 before the voids between the crushed stones along the surface to be covered have been filled or before the mortar filling said voids has become hardened. If the surface coating is to be applied to more than one face of the block, the mortar which is to constitute the same is introduced either at the side or top of the mold or at both places.

The openings 8 in the block may be produced by introducing cores into the mold 1,

building up the block around said cores, and afterward removing the same.

The block-section 9 (shown in Fig. 6 of the drawings) is one which is intended to be used in the construction of a pillar. The same is made in a similar manner to the other forms of blocks described, but has been shown as circular in cross-section and as tapering from its base upwardly. Each section 9 is formed with an opening extending vertically therethrough to enable the different sections which go to make up a complete pillar to be strung upon a metallic tube or upright 10.

While I have described my invention as a method of making building-blocks, it is intended, of course, to cover a method of making posts, pillars, or other building stone or foundation.

Having now described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. The method of making concrete building-blocks and the like, which consists in coating the individual stones with mortar, subjecting a mass of the stones thus coated to compression and simultaneously molding said mass into proper shape, whereby the stones are bonded together independent of the action of the mortar and without filling the spaces or voids between them, beneath the surface of the mass, and afterward pouring a thin mortar onto the mass and allowing it to flow down into the voids between the stones and partially fill the same.

2. The method of making concrete building-blocks and the like, which consists in coating the individual stones with mortar, subjecting a mass of the stones thus coated to compression and simultaneously molding said mass into proper shape, whereby the stones are bonded together independent of the action of the mortar and without filling the spaces or voids between them, beneath the surface of the mass, afterward pouring a thin mortar onto the mass and allowing it to flow down into the voids between the stones and partially fill the same and finally applying a surface coating to one or more faces of the block thus formed.

3. The method of making concrete building-blocks and the like, which consists in coating the individual stones with mortar, subjecting a mass of the stones thus coated to compression and simultaneously molding said mass into proper shape, whereby the stones are bonded together independent of the action of the mortar and without filling the spaces or voids between them, beneath the surface of the mass, afterward pouring a thin mortar onto the mass and allowing it to flow down into the voids between the stones and partially fill the same, and finally applying a surface coating of fine mortar to one or more faces of the block, before the spaces or voids between the stones at the surface have been filled.

4. The method of making concrete building-blocks and the like, which consists in coating the individual stones with mortar, subjecting a mass of the stones thus coated to compression and simultaneously molding said mass into proper shape, whereby the stones are bonded together independent of the action of the mortar and without filling the spaces or voids between them, beneath the surface of the mass, afterward pouring a thin mortar onto the mass and allowing it to flow down into the voids between the stones and partially fill the same, and finally applying, with pressure, a surface coating of fine mortar to one or more faces of the block, before the thin mortar introduced into the voids has set.

5. The method of making concrete building-blocks and the like, which consists in coating the individual stones with mortar, subjecting a mass of the stones thus coated to compression, and simultaneously molding said mass into proper shape, whereby the stones are bonded together independent of the action of the mortar and without filling the spaces or voids between the stones beneath the surface of the mass, pouring a thin mortar onto the mass and allowing it to flow down into the voids between the stones and partially fill the same, subjecting another mass of the stones thus coated to compression above the mass originally treated and simultaneously molding the latter mass into proper shape, pouring a thin mortar onto the latter mass and allowing it to flow down into the voids between the stones and partially fill the same, and continuing these steps until a block of the proper size is made.

6. The method of making concrete building-blocks and the like, which consists in coating the individual stones with mortar, subjecting a mass of the stones thus coated to compression, and simultaneously molding said mass into proper shape within a band of expanded metal or the like with which the mass of stones is surrounded, whereby said stones are bonded together independent of the action of the mortar and without filling the spaces or voids between them beneath the surface of the mass, and afterward pouring a thin mortar onto the mass and allowing it to flow down into the voids between the stones and partially fill the same.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

FREDERICK A. MALETTE.

Witnesses:
J. G. FARWELL,
I. V. TRAINOR.

CERTIFICATE OF CLERK U. S. DISTRICT COURT TO TRANSCRIPT OF RECORD.

United States of America,
District of Oregon,—ss.

I, G. H. Marsh, Clerk of the District Court of the United States for the District of Oregon, do hereby certify that the foregoing pages numbered from 3 to 254, inclusive, constitute the transcript of record on appeal from the decree of said court in a case in which the Shope Brick Company, a corporation, is plaintiff and appellee, and Roy Ward and Otto Peterson, copartners doing business under the firm name of Ward and Peterson, copartners, are defendants and appellees; that said transcript has been compared by me in accordance with the praecipe for transcript filed by the said appellants and is a true and complete transcript of the record and proceedings, in accordance with said praecipe, had in said court in said cause as the same appear of record and on file at my office and in my custody.

I further certify that the cost of the foregoing transcript is $55.85, and that the same has been paid by the said appellant.

In testimony whereof, I have hereunto set my hand and caused the seal of said court to be affixed, at Portland, in said district, this 19th day of July, 1924.

[Seal] G. H. MARSH,
Clerk.

[Endorsed]: No. 4290. United States Circuit Court of Appeals for the Ninth Circuit. Roy Ward & Otto Peterson, Copartners Doing Business Under the Firm Name of Ward & Peterson, Copartners, Appellants, vs. Shope Brick Company, a Corporation, Appellee. Transcript of Record. Upon Appeal from the United States District Court for the District of Oregon.

Filed July 23, 1924.

F. D. MONCKTON,
Clerk of the United States Circuit Court of Appeals for the Ninth Circuit.

By Paul P. O'Brien,
Deputy Clerk.

In the United States Circuit Court of Appeals for the Ninth Circuit.

Appeal—No. ——.

WARD & PETERSON,

Appellants,

vs.

SHOPE BRICK CO.,

Appellee.

STIPULATION RE PRINTING ORIGINAL EXHIBITS.

In the above-entitled cause it is hereby stipulated by and between counsel for the respective parties that the photographs which constitute Plaintiff's Exhibits Nos. 3, 4, 5, 6, 7, 8, 9, and 10, in the tran-

script from the Trial Court, need not be reproduced in making up the printed record, and the Clerk of the Court is hereby authorized and directed to omit reproductions of said exhibits from the printed record in the case.

Portland, Oregon, July 17th, 1924.

ATKINS & ATKINS,
Counsel for Appellants.
ROBERT R. RANKIN,
Counsel for Appellee,

[Endorsed]: No. 4290. In the United States Circuit Court of Appeals, for the Ninth Circuit. Ward & Peterson, Appellants, vs. Shope Brick Company, Appellee. Stipulation Under Rule 23. Filed Jul. 23, 1924. F. D. Monckton, Clerk. By Paul P. O'Brien, Deputy Clerk.

In the District Court of the United States for the District of Oregon.

July 15, 1924.

No. E–8661.

SHOPE BRICK COMPANY,

vs.

ROY WARD et al.

ORDER EXTENDING TIME TO AND INCLUDING JULY 31, 1924, TO FILE RECORD AND DOCKET CAUSE.

Now, at this day, for good cause shown, it is ORDERED that the time for filing the transcript

of record in this cause and docketing the same in the United States Circuit Court of Appeals for the Ninth Circuit be, and the same is hereby, extended to and including July 31, 1924.

R. S. BEAN,
Judge.

[Endorsed]: No. 4290. United States Circuit Court of Appeals for the Ninth Circuit. Order Under Subdivision 1 of Rule 16 Enlarging Time to and Including July 31, 1924, to File Record and Docket Cause. Filed Jul. 23, 1924. F. D. Monckton, Clerk. By Paul P. O'Brien, Deputy Clerk.